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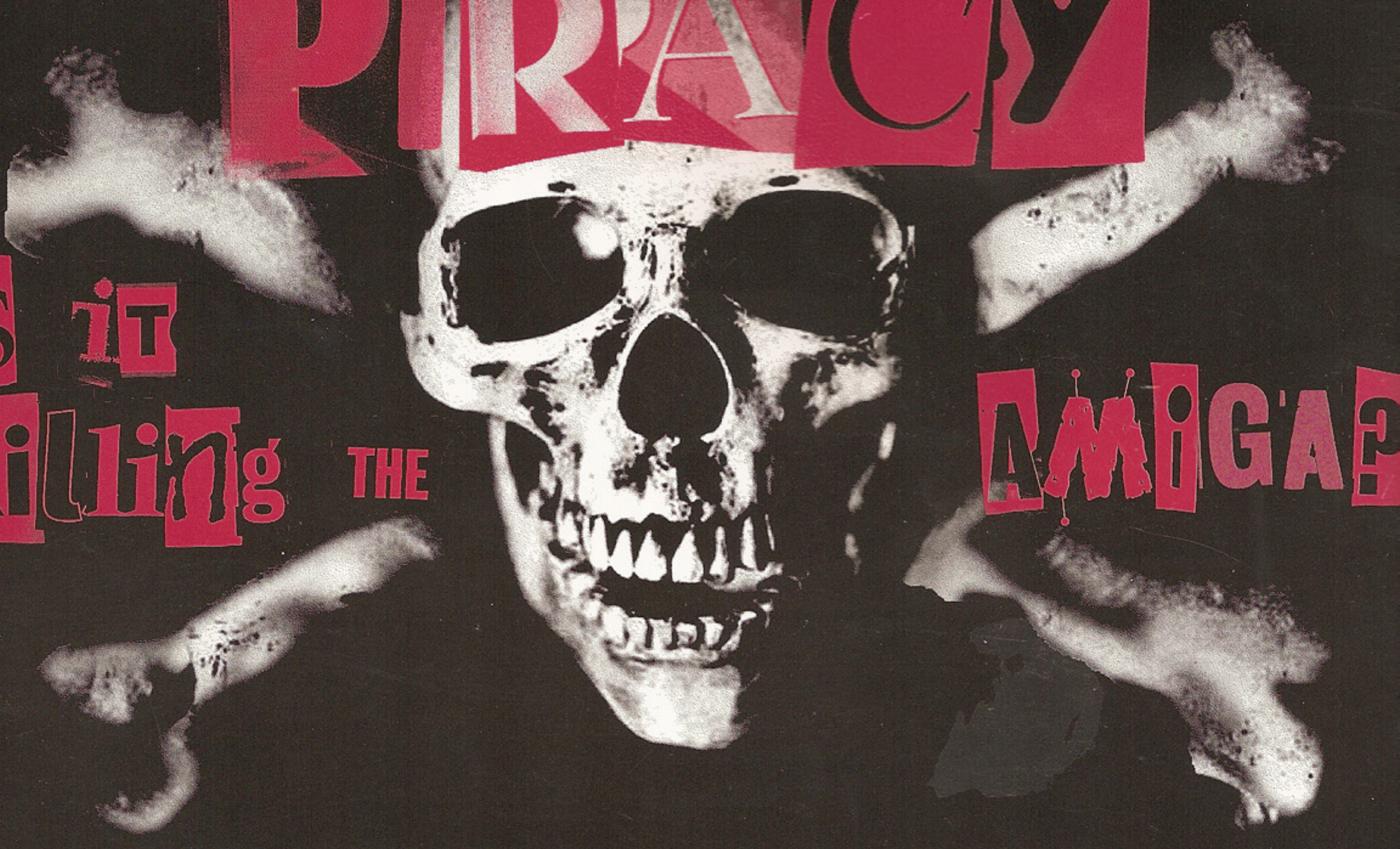
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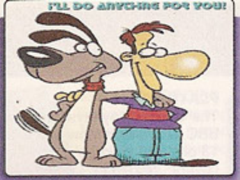
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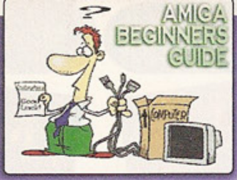


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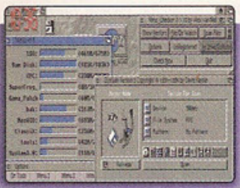


The Complete Beginners Tutorial. Covers all aspects of Workbench from file management to cli/shell commands and how they work, a guide on how to make bootable disks, as well as everything you need to know about Icons, Libraries etc, etc...

AMIGA BEGINNERS GUIDE

Only £5.00 Order: **ABG5-2** Any Amiga

Suitable for SCSI and IDE drives.



A suite of applications for Harddrive users. Included over 3 disks are a number of useful tools, like **DiskSalv** for repairing and salvaging damaged data, **HDSuite** includes fast HD backup and repair options.

Also contains many small but useful HD tools.

HARD DRIVE TOOLS

Only £7.00 Order: **HDT7-3** 500+ / A600 / A1200



Includes all your favourites: **Solitaire, Rummy, Craps, Pontoon, Blackjack, Montana, Klondike, Cribbage, Poker, Bluemoon, Spades** and a host of other games.

CLASSIC CARD GAMES

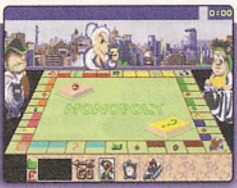
Only £10.00 Order: **CCG10-5** Any Amiga



A mammoth collection of over a dozen word games like: **Crossword Maker, Word Finder Pro, Scrabble, The Times Crossword, Wordhunt, Concentration, Hangman, SpellTris**- Tetris with words, a **Boggle**-Type game and more.

WORD PUZZLES

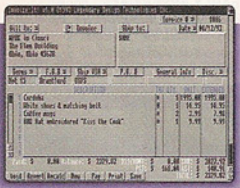
Only £8.00 Order: **WPP8-4** Any Amiga



Includes 2 versions of the classic board game, Monopoly. **Deluxe Monopoly** is suitable for use on any Amiga, while Statistical Monopoly, a variation on the theme is specifically for use on AGA Amiga's *(A1200etc)*.

DELUXE MONOPOLY

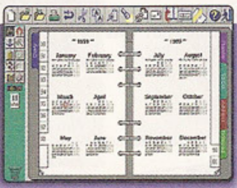
Only £7.00 Order: **MON7-3** Any Amiga



Accounts Office offers an easy way to keep track of your finances. Included in the pack is **Easy Accounts** - for small business and home banking, **Pay Advice** - Calculates tax etc and **Invoice it** - A superb tool for creating professional invoices and quotes.

ACCOUNTS OFFICE

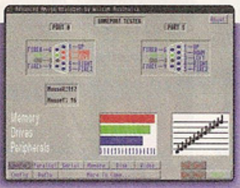
Only £6.00 Order: **ACS6-3** 500+ / A600 / A1200



The essential application suite for keeping track of appointments, birthdays etc. It's like having a personal organiser without all the paper. Simply run from the disk or install onto your harddrive. You won't miss an appointment again.

PRO ORGANISER

Only £5.00 Order: **POS5-2** 500+ / A600 / A1200



Everything you need to do a complete test of all parts of your Amiga, Including ALL ports, Graphics & Sound chips, Memory, Floppy and Hard drive, Keyboard and Expansion boards.

ADVANCED ENGINEERS KIT

Only £5.00 Order: **ENK5-2** Any Amiga

Workbench 3 Recommended.

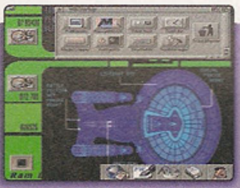


Workbench Enhancer will transform your current Workbench into a super stylish, gadget, all singing, all dancing "PowerBench". The set includes many patches and tools to make your Workbench *work* for you...

WORKBENCH ENHANCER

Only £7.00 Order: **SCF7-4** 500+ / A600 / A1200

A1200 Highly recommended for this title.



A New Workbench Theme Set - *Startrek*. Includes all you need to give your Workbench the style of Startrek. Hundreds of Icons, over a dozen backdrops and numerous sound clips. It's like being on the Enterprise but with no threat of attack from the Borg.

STARTREK WORKBENCH

Only £6.00 Order: **STW6-3** 500+ / A600 / A1200



Total Arcade features variations of your favourite arcade games. Includes **Pacman, Space Invaders, Galaxians** and **Asteroids**. *BONUS! Games:* **Defender, Frogger, Tron** and **Missile Command.**

TOTAL ARCADE!

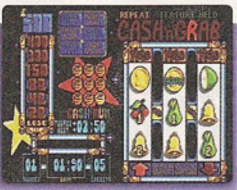
Only £5.00 Order: **ARC5-2** Any Amiga



A great pack for anyone wishing to improve their typing skills - Includes 3 skill levels and many different typing games/options, so even the young or "older" person can soon become an expert at typing.

TYPING TUTOR GOLD

Only £5.00 Order: **TYP5-2** Any Amiga



A unique compilation of three impressive fruit machine games. Includes: **Super Nova Fruit Machine, Fruit Machine Simulator** and **Professional Fruit Machine Sim.** All the fun of the arcade, but without the risk of loosing your money.

FRUIT MACHINE MANIA

Only £6.00 Order: **FMM6-3** Any Amiga



Ideal for all Desktop Publishing work, creating business cards, Posters, Invites, Video/CD Covers and more... Includes a powerful but easy to use DTP package, Dozens of distinct clipart images, around 30 font styles and example documents.

PUBLISHER PLUS

Only £10.00 Order: **PPS10-4** Any Amiga



Special 8 disk collection of all that is adult related... Includes over 100 stunning images, Adult Stories, Manga pictures, Many games like: Penthouse Squares and more. Suitable for adults only. Please state you are **over 18** years old when ordering!

ADULTS ONLY!

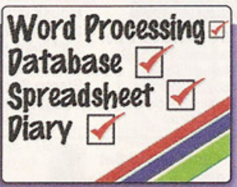
Only £15.00 Order: **AOP15-8** 500+ / A600 / A1200



All titles advertised on this page are supplied on floppy disk.

CD-ROM USERS

Purchase ALL these titles on CD for just £39.99



Home Office Suite includes a powerful **Wordprocessor**- with **Spell Checker.** An easy to use **Database**- Great for storing names, addresses or even your CD collection. A very powerful **Spreadsheet**, and an easy to use desktop **diary.**

HOME OFFICE SUITE

Only £6.00 Order: **IFC6-3** Any Amiga

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Add a total of £1 for P&P within the UK
Overseas P&P: £1 per title.

Utilities

Any 10 for just £5.00

Access - A Cool password program for ya Amiga.
Alt-Tabber - If you know what happens on a Windows-equipped PC when you press Alt-Tab, well you have the exact idea of what Altabber does.
AmSound - Plays random soundfile when booting Amiga.
AnalogMouse - Allows you to control your mouse with an analog joystick connected to the joystick port.
AutoRun3 - Check immediately internal diskdrive and if you insert some DOS diskette, its look For the Auto-StartUp. If the script exists then will be executed.
BootPic - Boot program that shows your system configuration The program shows the configuration with Amiga Logo.
CopyProgress - A replacement for Workbench COPY command- this one shows a Progress-bar.
Day-Tools - Includes DayCopy, DayList, DayMove and DayDelete. You can setup a time to perform any of these commands on a regular basis.
DelZero - DelZero is a AmigaOS 2.x/3.x DOS util that will change the size of a file to zero, then attempt to delete it.
DirScanner - A very nice and powerful Filefinder.
Features: Nice MUI-GUI, Search by name, size anf date.
- Matching files can be directly started or viewed.
Doodle -Allows you doodle on your Workbench screen. It has six built in drawing tools and it allows you to use eight colours for both the drawing and background.
DrivePrefs - A small CLI command to change the settings of trackdisk device floppy drives (i.e. normal floppy drives), allowing you to set the head step, settle and calibrate delays, number of retries on a damaged track, and to stop the drive click.
EasyTransfer -Transfers files between an Amiga and IBM using a wire serial NULL modem at up to 115200 bps.
Executor1.2 - Executor consists of a selection list from which you can run up to 1000 programs (applications, utilities, tools, scripts, games) with a simple double-click.
Fitter is a program that copies files from one source, most likely your hard drive, to disks. Fitter does this in an automated, optimizing fashion.
FixMWB - Drop those horrible messed up MWB icons onto the appicon. With any luck they will come out looking normal.
FloatingClock - It is basically a digital clock which sits nicely anywhere on your Workbench screen.
FMS - Useful for creating a floppy-like partition on your harddisk (so you can diskcopy to a floppy) WITHOUT actually having to create a special partition for it.
GuideGen is a utility to generate AmigaGuide databases. It allows you to add and remove nodes, edit each node's text, arrange the node's order, and create buttons and link them to other nodes, potentially in other files.
HappyDT - This commodity provide the use of datatypes to ALL software like Deluxe Paint, Brilliance, etc...
Iconer is a small program to use from DOS with programs like Directory Opus. It simply creates / replaces icons.
IfNoDrive - Warn or reboot if HD drive not present upon Boot.
JoinSplitter - A program that you can use to split and join files with using a graphical user interface!
KSC_TinyTools - 16 Very Small but VERY useful tools.
LastGuru - This program keeps informations about the last software failure and will print out as much information as possible.
MaxMenu - Attractive ToolManager like Startbar- Like Windoze95
MoreTools2 - MoreTools is able to add items to the Workbench "Tools" menu to run programs or execute commands.
MultiHelp is a program which provides you with online help for almost any program that you may be using from workbench.
MultiRename was spawned from the need to renumber and/or rename files which shared the same base name with numerical extensions.
OverRes - Get 724x566 resolution on a standard CM33II/1084s.
PCGamepad2Amiga - Describes how to build an adapter for connecting a PC gamepad or joystick to the Amiga and use it as digital joystick.
Physical Disk Repair is a utility to make bad disks re-usable for short term data transfer between computers.
Play16 - A versatile 8/16bit soundplayer for the Amiga with heaps of options.
Pointers - Eight new Pointers for WorkBench.
ProPassWord is Password protection for your HD it will ask for a user name and password on start-up
QuickGrab - A powerful configurable ScreenGrabber.
ReBoot - Auto Reboot after 5 seconds. If the main "system" Partition is not found.
SafeReset - Eliminates many Software Failures after a soft-reset on high spec Amiga's.
SayMore replaces the Say command. For use with the new narrator.device.
Size-Tools - Four small tools for deleting, renaming and copying files by their size.
SleepPointers - Animated Busy Pointers in hires for WB3.0+
Sort1.80e - Sorts ASCII-Files, FAAAAST
Swipe - An enhanced version of the DOS delete command. It is able to delete directories with assigns on them by identifying the assign and removing it before the deletion.
TalkMaster - A great speech toy!
TopazPatch is yet another program that will enable you to use a prefered font in place of topaz font.
VClock_v1.4 - This is a *real speech* clock. It runs as a commodity, uses little memory, and has some neat features.
Wait-Gui - Replacement for the 'Wait'-Command of your WB. This one has a Window with a progressbar and some other nice enhancements!
WB-Tidy - A little program that lets you diddle around with the size and position of your Workbench windows.
Win95KeyboardMap - Windows95 GB Keyboard Keymap.
WinFo - Show volume usage graphically - A graphical version of the 'info' shell command.
XToolBox - A fast and easy to configure menu for Workbench.
YADI is a small cli/shell program to transfer disk images to and from Amiga devices. Similar to DMS but YADI can also make a disk image of a whole hard disk or and image of a PC disk etc. So backing-up your HD is a sinch!
YetAnotherCalculator - A very simle calculator that supports conversion of HEX, DEC, BIN etc
ZipMount
Mountlists to use PC and Mac formatted IOMEGA ZIP disks with your Amiga. (CrossMAC and CrossDOS needed).

Hot Software

Libraries - The definitive 4 disk set.*(17-4010abcd)*	£8
Professional Mono Clipart - 10 disk coll. *(GFX13-10)*	£10
Softmem - Doubles the available fast memory. *(SMS3-1)*	£3
Action Replay (A1200) rip graphics & sounds. *(3432)*	£4
Spectrum Emulator - Includes emulator & 50 games.*(SPE5-3)*	£5
Quiz Challenge - General knowledge Quiz. *(QUZ5-2)*	£5
Compugraphic Fonts - 50 Fonts for Wordworth etc. *(PSF7-3)*	£5
Hardware Projects - Hardware hacks for A500. *(HWP5-3)*	£5
Hardware Projects - Hardware hacks for A1200. *(HWP6-3)*	£5
Gourmet Cookbook - Hundreds of recipes. *(GCB3-1)*	£3
3D Garden Designer - Garden Design Layout. *(GRN3-1)*	£3
Font Designer - Plus 50ish fonts. *(FNT5-3)*	£5
Disk Expander - Double your Hard drive space. *(EPU4-2)*	£4
Cataloguers - Catalogues CD's, Video's etc. *(CTG5-3)*	£5
Virus Killers - A number of latest detectors *(VIP5-3)*	£5
Startrek WB - Startrek Backdrops for Workbench. *(STB5-2)*	£5
Soft AGA - AGA Emulation for A500+/A600 *(17-4511)*	£3
AGene 5 - The best family tree database. *(17-4056)*	£3
GameZ - 21 Arcade, Puzzle and Action games. *(TWG3-1)*	£3
Tetris Mania - 5 of the best Tetris Games. *(TET5-3)*	£5
Puzzle Pack - Six mega-addictive puzzle games *(PUZ5-2)*	£5
CheatZ - Over 2,000 top tips and cheats for games. *(CHT5-2)*	£5
NibCopy2 - Removes password protection from games?. *(2605)*	£3
Lockpick2 - Removes password protection from games?.*(3410)*	£3
Maverick Copy - Powerful backup software. *(3494)*	£3
Re-Org - Powerful Disk Optimiser (Floppy & HD). *(4108)*	£3
Speedy Workbench - Replacement WB (loads in 5 seconds).*(3916)*	£3
Windows Bench - Updated WB for A500 (like Win95).*(2050)*	£5
Windows Bench 2 - Win95 style WB for A500+/A600.*(2479-2)*	£4

When ordering please quote the items order code, title and price You can order either by Phone, Fax, Email or Post.
Actual screen-shots are shown in most cases. In an effort to continually improve our software packs we reserve the right to change/update software as we see necessary. E&OE
All listed titles have been tested on A500+, A600 & A1200. Although some individual programs may require an A1200.
Phone: 0 1793 432176 Fax: 0 1793 514187 Email: epicmarketing@dialin.net Post: Epic Marketing, BSS House Area50, Cheney Manor Ind. Est. Swindon, Wilts. SN2 2PJ
Call before ordering if you need any advise. Technical Support is available on all our titles.

Month **In View**

A puzzling issue for me, **Ben Vost**, as I contemplate just why Colin keeps using these peculiar pictures of me.

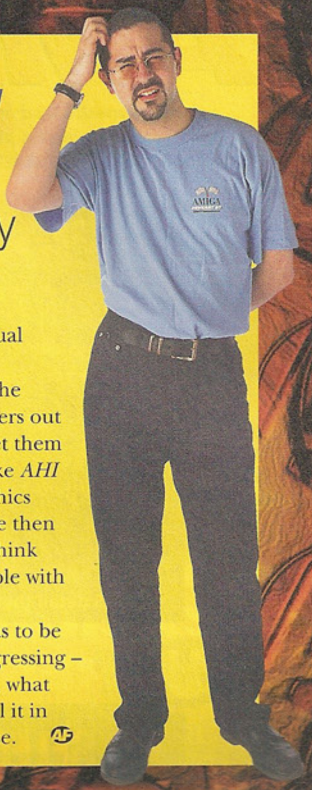
Rod Hull is dead, long live Rod Hull. He apparently fell off his roof to his doom, but I'd be surprised if emu wasn't behind the whole thing. Still, it's been an exciting month for Amiga news, as you'll be able to tell from our expanded news section this issue. What with a new line-up at Amiga Inc., the first showings of OS3.5, promises of new machines from AI by Christmas, a new Java Virtual Machine from Holger Kruse and announcements about Newtek about the free availability of *TV Paint* and the source code for the Video Toaster and Video Flyer, things have been pretty hectic.

Not only that, we have another packed issue for you full to the brim with groovy stuff like Simon Goodwin's in-depth probing into just how A1200 accelerators work, our cover feature all about how piracy is still affecting the Amiga and reviews of items like the Delfina 16-bit sound card for the A1200, *PowerMovie* and *TurboPrint 7*.

In addition to all this great stuff, we have an exclusive interview with the guys behind the porting of *Netscape* to the Amiga, the Free Amiga group, and, most importantly, our annual reader survey.

This is vital for us to be able to point out the state of the Amiga market to all those developers out there still writing for base machines, and to get them to write more flexibly, using the newer APIs like *AHI* and *RTGMaster* (which doesn't require a graphics card to work). If you have a base level machine then you need to fill in the survey too so we don't think that the Amiga market is just made up of people with '060s and graphics cards.

We do this survey every year and it helps us to be able to find out how the Amiga market is progressing – whether we need to change what we're saying, what we're covering and so on, so make sure you fill it in and pop it in the post. You know it makes sense.



Ben Vost
Editor



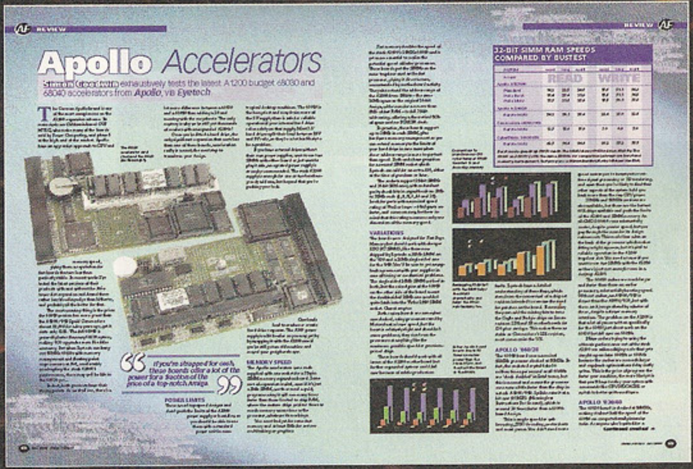
READER SURVEY PAGE 14
Vital information about your Amiga can only be gathered one way – you sending it in. Here's our annual survey so please take advantage of it.



PIRACY PAGE 18
We talk about the scourge of the Amiga and how it's still conspiring to bring our platform to its knees.



NETSCAPE PAGE 28
Amiga Format talks to Ben Rothwell and Ian Parker about their port of *Netscape* to the Amiga.

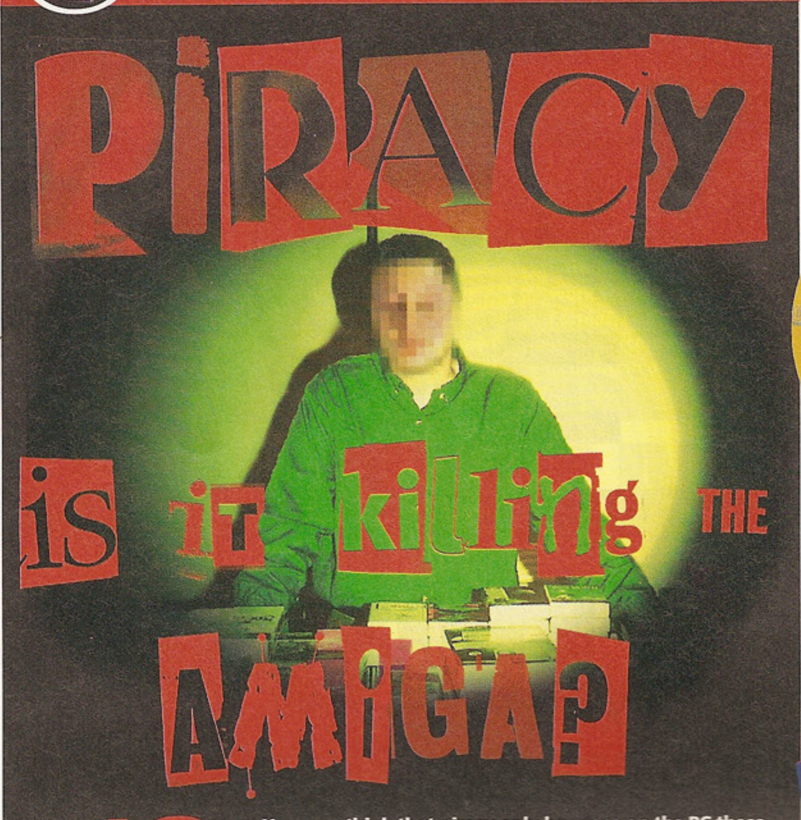


A1200 ACCELERATORS PAGE 58
You asked for more info about accelerators so we're giving you the most in-depth review of two new cards for the A1200.

AMIGA FORMAT Contents

ISSUE 123 MAY 1999

COVER STORY







All the latest news and developments, explained over a cup of tea...

CD-ROMS

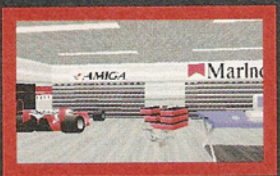


COVERDISKS





SCREENPLAY





Racing, fighting, puzzling and putty. It's all here in ScreenPlay this month!









WHAT'S UP?

Latest OS news
The feature list revealed, plus plans for Classic Amiga OS development.

Amiga who's who
Key Amiga personnel change titles in a major reshuffle at Amiga Inc. and Int.

Amiga G3/G4
phase 5 unveil their processor plans.

AMIGA WORLD NEWS

On the move

As you'll see from the news stories on this spread, Amiga Inc. have finally girded their loins after two years of seeming inactivity and have released some new information and detailed their plans for the future.



Probably the most important news item is the first appearance of the long-awaited OS3.5 at the Amiga '99 show in St. Louis in the middle of March. The first new version of the Classic Amiga OS since 1994, OS3.5 has some interesting new features, including Internet access, built-in CD-ROM support, a new icon library and a new GUI based on Christopher Aldi's *ClassAct*.

The feature list for the new OS is quite extensive, even though the original intention was to "get something out there quickly", and even the printer.device has received a much-needed update. It now supports 24-bit printing and makes it easier for third-party add-ons like *TurboPrint* to make use of the printer device.

As previously stated, the new OS will need a somewhat upgraded machine before you can even use it – Kickstart 3.1 ROMs, 4Mb fast RAM and a CD-ROM drive – but it will take advantage of higher specs, such as the new support for the PowerPC, although it's unstated as to what form that takes.

CLASSIC OS DEVELOPMENT

Finally, although this version of the OS might not have all the things you hoped for (68K emulation, RTG, RTA, USB support and so on), and contrary to previous statements, Amiga Inc. have stated that OS3.5 isn't the last version of the OS line for Classic Amigas.

They plan to release 3.6, 3.7 and so on to implement more new features and move the platform towards greater PPC compatibility, with version 4 being the new final, incorporating full PPC support in the shape of 68K emulation, PPC native libraries for certain functions (graphics.library, layer.library and possibly more), and even a new version of Kickstart.

For further details on this, check out their official website, which can be found at http://www.amiga.com.

Features:

EASY INTERNET ACCESS

- TCP/IP stack.
- Multi user support.
- Multi interface support (Internet and Ethernet).
- Latest Socks v4/5 client module for firewalls.
- Enhanced SANA II support for fast transfer rates.
- Internet browser with offline/online support.
- New cross-application email library.
- General API for sending and receiving emails.
- New email client based on the email library.

SUPPORT FOR HARD DISKS > 4Gb

- *NSDPatch*.
- New standard for 64-bit devices.
- Updated *Info*, *Format*, *Diskcopy* and *FastFileSystem*.
- New *HDToolBox*.
- New GUI style.

MODERN GRAPHICAL USER INTERFACE (GUI)

- New icon set (*GlowIcons*).
- New complete icon set for all system tools.
- New icons for most applications.
- New icon library.
- Icons with up to 256 colours.
- Automatic colour adaptation.
- *NewIcon* and standard icon compatible.
- New BOOPSI library.
- Completely new set of powerful BOOPSI gadgets.
- Very fast, modular and scalable.
- AmigaOS compatible implementation.
- Compatible with existing BOOPSI classes.
- New resource library which loads and manages all GUI resources, changes the GUI without recompilation of the application which can be used with any programming language.
- New WYSIWYG GUI editor for developers.
- Creates resource files that are

Talking heads

What have the Amiga Format staff been doing this month?



Ben Vost
Editor
Training, talking and spending profit share mainly, actually. I've also been freelancing, writing reviews of *Syphon Filter* and *Silent Hill* for *PlayStation Power* and other Future mags.



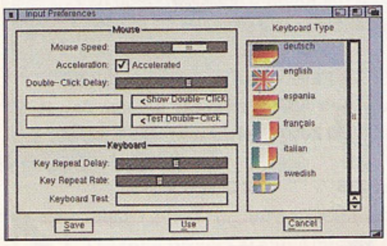
Richard Drummond
Staff Writer
Since I've only just moved to Bath to start work for *Amiga Format*, I've mainly been trying to overcome the culture shock of living in a "foreign" country...



Mark Wheatley
Prod. Editor
A bit of an old photo this as I've had a haircut and now look uncannily like a pineapple. I've also taken advantage of the sunny spell and have been feeding the squirrels in the park. Aww.

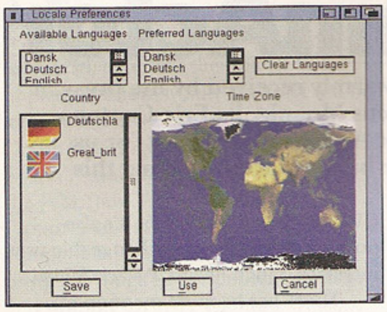


Colin Nightingale
Art Editor
Forget the Oscars, I've seen *the* film of the year, *Dobermann*: comedy sex, drugs and gratuitously violent cops getting their comeuppance. If you get the chance, see it.

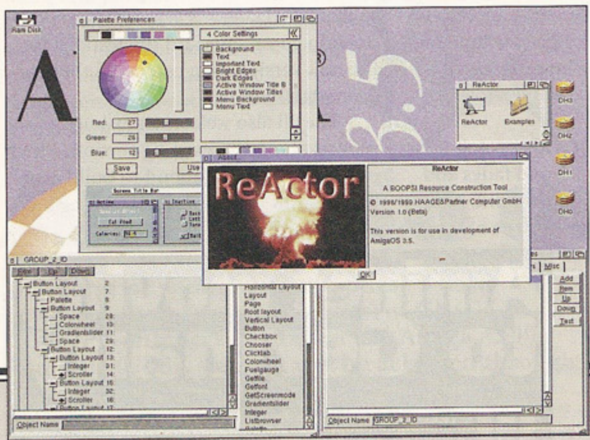




The new-look prefs programs are resizable and have much nicer-looking gadgets.



ReActor is a visual interface creator for the new Workbench. It should make it easy to create GUIs for applications which you've written.



NEW LINE-UP

There has been a shuffle of personnel at Amiga Inc., also announced at the Amiga '99 show in St. Louis. Although Jeff Schindler stays on at the new Amiga Inc., he'll no longer be General Manager – he's shifted sideways and is now Vice President of Strategy and Product Management. Michael Reese and Jim Von Holle have joined as Vice President of Operations/Administration and Vice President of Marketing respectively.

> *Although Jeff Schindler stays on at the new Amiga Inc., he'll no longer be General Manager – he's shifted sideways...*

Ancient Scot Bill McEwen hasn't been dropped, although he's not working under a fixed contract with Amiga Inc. at the moment, and Petro Tyschtschenko becomes Vice President of Distribution and Reseller Sales, surely a prelude to the two companies (Amiga Inc. and Amiga International Inc.) becoming one, in a move designed to reduce the current confusion over the demarcation of rules that currently exists. To replace Jeff Schindler at the top, another Gateway staff member moves across. Jim Collas, who was Senior Vice President of Product Development at Gateway (a very esteemed position in which he managed nearly 2,000 people), is now President of Amiga Inc. and is committed to driving the company forwards with new machines before the year is out.

Jim Collas came to the World of Amiga show last year and fielded a number of the questions about the proposed PC-based Developer Box. Whether this machine is still on the cards is unconfirmed at this time, despite Amiga Inc.'s intention to present developers with a machine at Atlanta's prestigious E3 games show in May and the autumn Comdex show in Las Vegas.

As well as personnel changes and additions, the whole company is moving from its less-than-glamourous position under Gateway's wing in South Dakota to the sunnier climes of northern California; San Diego to be precise, although R&D will be based on the Mexican border in San José.

In order to staff the new, improved Amiga Inc., they're advertising for a number of software engineering positions and, as I write this, a number of job offer letters have gone out to potential employees for the new San José facility.

used by the new resource library.
- Automatic localisation of the application.

EXTENSIVE CD-ROM SUPPORT

- *CacheCDFS* which is ISO9660, RockRidge, Joliet (Win 95/98) and MAC HFS compatible, and supports multisession CDs, Amiga protection bits and file comments.
- New programmable *PlayCD* audio player for SCSI and ATAPI CD-ROM drives.
- New *CDFSPrefs*.

FULL PRINTER SUPPORT

- New printer device.
- Drivers for all common printers.
- PPC support.
- New functions to print all kinds of bitmaps.
- New API to define page size and page breaks correctly.
- Support for the 24-bit *Picasso96* DumpRastPort command.
- *TurboPrint*-compatible functions in order to print 8-bit chunky and 16-/24-bit bitmaps.
- New printer preferences.

- Updated for new GUI style.

POWERPC SUPPORT

- New WarpUp PPC support.
- AmigaOS compatible integration.
- Extensive functionality.
- Hardware-independent driver system that's easy to extend.
- New preferences.

HTML DOCUMENTATION

- New comprehensive instructions.
- Reworked documentation covering Workbench, DOS, ARexx and hard disk.

- Extensive illustrations.
- Bilingual English/German.

BUG FIXES

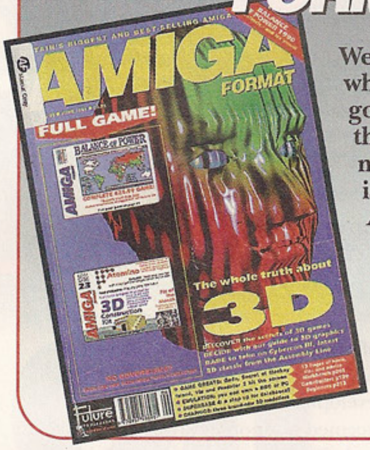
- Corrections and extensions.
- Accelerated and reworked Workbench.
- Extended and reworked ASL library.
- Reworked Bullet library.
- Reworked Diskfont library.
- New DataTypes for JPG, GIF, AIFF.
- New SCSI mount tool.
- Reworked A2024 monitor driver.
- Reworked CLI commands *Join*, *Status* and *Type*.

Continued overleaf ➡

100 issues ago

AF23 June 1991

AMIGA FORMAT



We look at what was going on in the Amiga market 100 issues of *AF* ago…

■ Cover feature: The whole truth about 3D, with details about 3D games, 3D on your own machine and chats to games companies about 3D. Andy Beveridge of the Assembly Line team predicted: "…[with] people getting more and more interested in 3D they're going to start throwing hardware at the problem. You'll have a chip with a polygon filler on it."

■ On the disks: A double disk issue with a complete game, *Balance of Power 1990.* To tie in with the 3D theme, the other disk has a demo of *3D Construction Kit* from Domark to let you make your own *Driller*-style games.

■ News: Details on the fourth Indy game, CDTV, HAM-E and *Wordworth* launched, plus news about the VAT increase to 17.5% affecting the cost of games.

■ Prices: SSL (Solid State Leisure) were offering A2000 owners their impressive-sounding B5000-40 for a mere £1,162. What was it? Only a 40MHz '030 with 4Mb RAM…

■ Games reviewed included: *Gods* (Renegade) 90%, *Viz* (Virgin) 70%, *Predator 2* (Image Works) 81%, *Secret of Monkey Island* (US Gold) 92%, *CyberCon III* (US Gold) 90%.

■ Serious products reviewed: *ATOnce* (Silica) £199, *The Emulator* (BBC emulator) (Genisoft) £39.95, *Superbase Professional 4* (Precision) £349 + VAT (either at 15% or 17.5%!), *Pandaal Daatascan* (Pandaal) £189.95, *Bodega Bay* (Amiga Centre Scotland) £350.

■ Notes: See? Even then people wanted to tower up their A500s, with the Bodega Bay. It gave an A500 Zorro II slots and 5.25" bays.

■ Pages: 236 ■ Cost: £3.95

Newtek open up

Another announcement welcomed at Bob Scharp's Amiga '99 show was Newtek's revelation that the *Video Toaster* and *Video Flyer* source code would be made freely available to anyone who wanted it. While the use for this in the UK or Europe is somewhat limited since neither product exists in a PAL version, the source code may well open up new ways of doing things for other hardware solutions and, if nothing else, will improve the stagnant code for US users of these products.

In another statement, Newtek offered the seminal French paint package for graphics card users known as *TVPaint.* Although *Amiga Format* wasn't aware that Newtek even owned the rights to this product, we're very pleased that something with an official retail value in excess of £500 should be freely available for download. You'll need a graphics card running either *Picasso96* or *CyberGraphX* to make use of this, but it really is the best 24-bit paint package around.

Unfortunately, *Lightwave* wasn't included in the source code bonanza, which is a great shame since version 5, the last one released, got a very poor score in *Amiga Format* because of its many bugs and its inability to work with graphics cards in a stable way. It also looks unlikely to be further developed by the American company and would profit no end from being at least licensed to an Amiga-oriented company for updating to better specifications.

You can get to Newtek's website to download the free version of *TVPaint* at this address: http://www.newtek.com, but the offer is time-limited and may have expired by the time this magazine is on sale. Hopefully the same address will get you to the source code for Newtek's other products.



The superlative *TVPaint*, now free from Newtek.

New MainActor

Although *MainActor Broadcast* was warmly received by the press, it didn't sell well enough to stop Marcus Moenig, its Eric Cantona-resembling author, from leaving the Amiga. Fortunately for us, Haage & Partner have taken up the baton in redeveloping this excellent package.

The new version is going to support industry standard animation file formats including *AVI, QuickTime,* MPEG and Amiga styles like YAFA and XFA. It'll also support single images for compilation into anims including all variants of JPEG and PNG. Replacing the rather counter-intuitive file list will be a proper timeline that graphically shows the progress of the animation and sound and allows for better composition.

MainActor Broadcast is also going to be able to offer the wipes and fades and so on that the original version did, but will build on them with the likes of morphing and zooming effects.

The new version will also have a new front end appearance, although Haage & Partner have not yet decided whether it should be *MUI*-based or whether it should make use of their new GUI developed for OS3.5. It's also possible that it'll have a changeable user interface, much like TCP stack *Miami.*

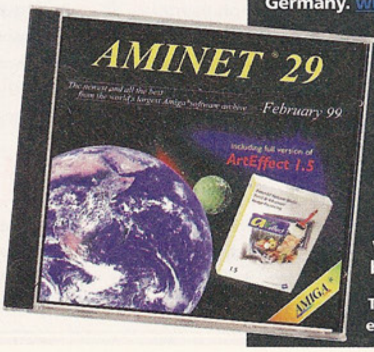
There has been no mention of CDXL, the Amiga's native multiplexed animation format, in the press material so far, but Haage & Partner are very open to comments and suggestions for the new version. You can email them at mainactor@gmx.net.

They'll also welcome any bug reports about the existing version, which indicates that they intend to build on that version rather than starting again from scratch.

Aminet moving to Germany

We received this note from Urban Möller with regard to the problems that Aminet has been experiencing of late: "Because of continued file system troubles on the current main site, wuarchive.wustl.edu, we're moving the main site to Germany. wuarchive will be back as a mirror when the file system trouble is resolved. The main site will very probably remain in Germany and we're trying to set up a computer of our own as a main site so we're no longer at the mercy of system operators. The most reliable site during this transition should be de.aminet.net, with most other mirrors being fully operational immediately or within days.

"I cannot predict for how long wuarchive will be down. Sorry about the inconvenience, but it's really not under my control."



The new servers should mean an increase in the ease with which you can upload to Aminet.

News about afb

The Amiga Format Bulletin (afb) is proceeding strongly. We currently have 421 subscribers and will probably have more than 500 by the time you read this. For those who don't have Internet access, we're putting the digests on the *AFCD* for you to read.

We use afb for feedback and obviously give the people on it first priority when it comes to getting things like the quotes in the piracy feature in this issue. Although the afb currently has more than 80 messages per day on average, the service it uses is very flexible and allows you to change your preferences so you can read these messages on the web if you don't want to receive that many emails every day.

There are also other facets to afb too, such as the calendar function which we use to show the deadlines for competitions and events, the poll function which allows you to give your opinions on a particular topic, plus folders which hold any important information.

You can subscribe to the afb by going to the following website and signing up: http://www.egroups.com/list/afb/

If you want news on when the next issue of *Amiga Format* will be out, we offer that at: http://www.egroups.com/list/afb-announce/

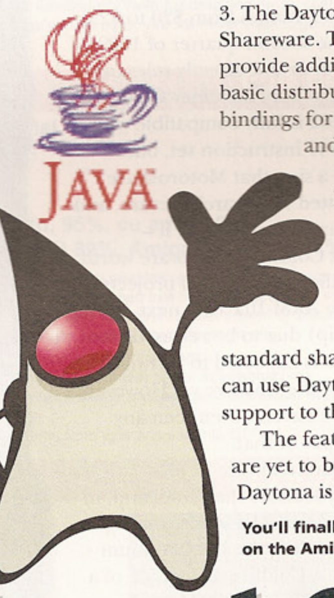
It's worth joining both lists since they each offer unique things and the announce list usually only has one email every four weeks.

Java 2 for AmigaOS

Nordic Global Inc. unveiled their Daytona project at the Amiga '99 Show in St Louis. Daytona is a complete Java 2 run-time system for AmigaOS, based on the official Java 2 implementation by Sun. Daytona will be available in three different parts:

1. The basic Daytona distribution will be freely available and will consist of the JVM (Java Virtual Machine) and support classes. It will feature a 100% compatible Java 2 API, multithreading using an Amiga native implementation and support for *AWT* (*Abstract Windows Toolkit*), *JFC* (*Java Foundation Classes*) *Swing* and *Java2D*.
2. The DaytonaDev package will also be free and will include a Java byte-code compiler. It's intended for developers who want to write their own Java programs.
3. The DaytonaPlus package will be Shareware. This will be an add-on to provide additional Amiga features to the basic distribution. It will contain *AWT* bindings for native AmigaOS displays and will allow GUIs built with *Swing* to have an *Intuition* look and feel. Also to be included are an Applet API and run-time system with a standalone Applet viewer. The API will be accessed through a standard shared library so developers can use Daytona to add Javascript support to their browsers.

The feature list and Shareware fee are yet to be finalised. A beta release of Daytona is planned for this summer.



You'll finally be able to wave hello to Java on the Amiga this summer.

Amiga to get G3/G4

In a surprise announcement, phase 5 have revealed plans for the CyberStorm G3/G4, a PowerPC-only accelerator for the Amiga A3000 and A4000. 68K support will be achieved through Haage & Partner's software emulator.

The base version of the card will feature a 400Mhz PowerPC750 and 1Mb of L2 backside cache running at 200MHz. This will offer similar performance to the new G3 Power Macs which, according to Apple, are twice as fast as a similarly clocked Pentium II for some benchmarks.

phase 5 estimate performances of 15-20 times that of a 68060 at 50MHz. The processor itself will be sited in a ZIF (zero insertion force) socket. This will allow easy upgrade to G4 (AltiVec) processors when these are released.

The board will support up to 1Gb of memory via standard 100Mhz SDRAMs in two DIMM slots. A peak memory transfer rate of 582Mb/s is claimed.

Also provided on-board is a single PCI 2.1 interface and 512Kb FlashROM for system software. phase 5 themselves have no plans to implement any add-ons for the PCI interface, but information will be made available to third parties who want to develop PCI backplanes or software drivers for existing PCI cards.

The projected price for the base system is DM1,995 plus local sales tax. However, due to the uncertain nature of the Amiga market, phase 5 require 1,000 pre-orders for production of the CyberStorm G3/G4 before they will proceed. Customers who do pre-order will benefit from a lower price of DM1,1750. Prices for the card with a G4 installed will be announced as soon as the list price for the new XPC7400 AltiVec processor becomes available.

For more information, or to pre-order your CyberStorm G3/G4, visit: http://www.phase5.de/amiga/csg3g4e.html

CYBERSTORM G3/G4
phase 5 DIGITAL PRODUCTS

Vital Horgan



This "Powered by Amiga" business is all very well, but I think I've spotted a flaw in the masterplan. While we're all concentrating on the new Amiga that's in development, it's easy to forget about all the other things that Amiga Inc. have lined up for their new technology. They've said on a number of occasions that they're aiming to get Amiga technology used in a whole range of digital convergence appliances.

It's easy enough to imagine some of these things proudly wearing the Powered by Amiga logo – for example, a swanky new integrated digital TV with built-in web browser and optional keyboard for email. Ace.

But what about some of the other appliances in need of compact little operating systems? The QNX core of the new AmigaOS should allow it to be scaled right down to handle things like washing machines, microwave ovens and photocopiers. Fair enough, it's all potential revenue for Amiga Inc., but what happens if they insist on having their Powered by Amiga logo stuck onto everything that uses some Amiga technology?

Imagine it, boasting to your mates that you've got this new wonder-computer that's going to make their PC look like a Speak & Spell. "What is it?" they ask. "It's an Amiga," you proudly proclaim. "Oh yeah, now where have I heard of that before?" comes the reply. "That's it, I've got one of those in my toaster. It must be hot stuff!"

The ridicule doesn't bear thinking about! Now if they were to licence rights to the OS and the use of the logo separately, we could be in for a much better time of it. Just reserve the right to give the logo to the most prestigious clients: major movie companies, world record-breaking feats of engineering and, of course, NASA, who could put a bloody great Boing Ball on the side of the next Space Shuttle...

Tony Horgan



How the space shuttle might look in a parallel dimension.

Continued overleaf ➡

New Coldfire

Motorola have shipped the first Coldfire v4 processors to Hewlett Packard. These are clocked at 150MHz and give 2.1 to 2.5 times the v3 performance. They're designed to be "a cost-reduced migration path for higher performance 68K system designs", but don't implement the full 68K instruction set, just a substantial subset with some extensions. They're not as complex as the 68060 but they're a lot cheaper.

Motorola say: "By leveraging the 68K programming model and instruction set, the Coldfire family provides a head start to designers who are familiar with the ubiquitous 68K family."

MOTOROLA

Is Coldfire a possible contender for the next Amiga processor?

The whole chip is just 4.5 square millimetres, built in a 0.25 micron process (four times denser than original '060s which are made at .43). They have simple superscalar optimisations (branch and assignment folding) and execute most other instructions in one clock cycle. They have only one integer execution unit and no FPU, though they do have fixed point decimal extensions. They use 'Harvard Architecture', like 68Ks from the 68030 onwards, and thus they access code and data caches in one cycle. The price ranges from $20 to $25, from the second quarter of 1999.

They're not directly relevant to Amigas as only the older Coldfire MCF5102 is fully compatible with the 68040 instruction set, but they're a sign that Motorola are committed to the architecture, and to making money out of it – current Coldfire designs are worth $2.5 billion, in over 200 projects.

The ARM-10T (the next Acorn Risc chip) due to be released later this year is expected to be twice the speed of the Coldfire v4. However, so far we haven't even seen any prototypes of that.

So there's more to microprocessors than Intel and, in fact, AMD's K6-III is outrunning and outselling the Intel Pentium III now. A Coldfire 4 costs 5% of a P III for 33% of the MHz and, typically, a lot more work per Hz. The AMD is made on the same 0.25 process scale as the Coldfire v4. IBM have made an experimental 1,000MHz processor in this process scale, also touted for the ARM. The next step will be 0.18 microns…

POWER UP YOUR MEMORY

Power Computing have announced the arrival of single-sided 64Mb SIMMs to their offices, suitable for use in Blizzard 1260 and 1230 accelerator cards for the A1200. They also have 128Mb double-sided SIMMs for those who want even more memory. These should work in a CyberStorm accelerator too, giving you the potential to have a massive 512Mb of memory at your disposal.

Power told us that the 64Mb SIMMs will cost £135.95 each, and since the 128Mb SIMMs are double sided, they're actually less expensive megabyte for megabyte at £199.95. Call Power Computing on 01234 851500 for more details.

Free CD offer

EMComputergraphic have offered *Amiga Format* readers a special deal whereby anyone ordering £30-worth of their extensive range of inkjet cartridges will receive a free copy of their *Index* CD. *Index* gave thumbnails and information about a wide range of CDs available on the Amiga at the time of its release. While it may be out of date now, it still offers a good way to catalogue all those older clipart CDs you have. They're also giving away the excellent *Phase 4* CD (worth £40) to anyone who orders £40-worth of inkjet cartridges.



Spend £40 or more on inkjet cartridges and get the fantastic *Phase 4* CD absolutely free!

You can order from their website at http://www.emcomp.demon.co.uk or ring them on 01255 431389. Readers must quote EMC CD-ROM giveaway when placing their order to qualify.

Other news

SINGLE-CHIP MPEG DECODER

Fujitsu have introduced the first single-chip MPEG-2 decoder. MPEG-2 is the standard used for the compression of digital video and audio data. This device, designed to allow the production of low cost terrestrial, cable and satellite set top boxes, has a programmable RISC CPU core. It will support DVB descrambling, letterbox format conversion, teletext insertion and enhanced OSD.



NEW 10,000 RPM DRIVES

The endless quest to make larger and faster hard drives has been furthered by Western Digital with the announcement of additions to its WD Enterprise range of low-profile Ultra2 SCSI drives.

These new drives will feature a 10,000 RPM rotation speed and will be available in 9.1Gb or 18.3Gb capacities. Production units are expected to start shipping this summer.

DEBIAN 2.1 RELEASED

***Debian 2.1*, codenamed 'Slink', was released on March 9th. *Debian* is a GNU/Linux distribution, a free *Unix*-style operating system for Intel x86, Sun SPARC, DEC Alpha or Motorola 680x0-based machines.**

Although *Debian* has supported the 68K series processors for some time, this release features the first official distribution for this architecture. Supported machines include the Amiga, Atari and Mac. Further information can be obtained from their website, which can be found at: http://www.debian.org/.

ALTERNATIVE OS

Perhaps the first steps towards consumer choice are being made in the desktop PC market. Be Inc. claim that Fujitsu Computers are to install BeOS on their new Pentium II-based Silverline PCs which will ship in Europe in May. AF

More offers!

As if free CDs from EMC weren't enough, we've also arranged for Eyetech to give *Amiga Format* readers some excellent pricing on some of their most popular products. Cut out the voucher at the bottom of this page and send it in to Eyetech with your order for one of the products ticked and you'll save a pretty penny and no mistake. This coupon is only valid until the end of April (30.04.99), so you'll need to get your skates on and send it to: Eyetech Group Ltd • 12 West Green • Stokesley • North Yorks • TS9 5BB.

PRODUCT	NORMAL PRICE	SAVING WITH COUPON	YES PLEASE ✓
Apollo 1260/66 accelerator	£349.95	£40	☐
EZWriter external systems	From £249.95	£20	☐
Eyetech EZGen	£69.95	£10	☐
EZWriter bare mechanism	£179.95	£10	☐
PortJunior	£39.95	£10	☐
Umax/Photoscope/Scanner bundle	£179.95	£10	☐
17" SVGA monitor	From £199.95	£10	☐

netconnect £49.95



program : netconnect
version : v2.3
format : cd-rom or floppy disks
available : yes
awards amiga format gold, 96%, cu amiga 94%
amiga magazin (DE) 85%, amiga plus (DE) 85%

The award-winning **NetConnect v2** is the easiest and most comprehensive Internet compilation designed to enable any Amiga user, from novice to expert level, to get onto and use the Internet. By using the new Genesis Wizard, a user should be able to connect to the Internet in a matter of minutes. Containing Genesis, Voyager-NG, Microdot-II, AmIRC, AmFTP, AmTelnet, AmTerm, NetInfo, AmTalk, X-Arc and the Contact Manager. Ideal for both an Internet or local area network connection.

- *Eleven Commercial Programs* - contains the highest quality Internet software, all commercial versions.
- *Truly Integrated* - the beauty of NetConnect v2 is the integration. Contact Manager works with Microdot-II, Voyager, AmIRC and more. Centralised MIME preferences works between all the programs.
- *Flexible Dock Bar* - setup and launch all your software from this advanced and flexible tool bar
- *Aimed Towards Beginners Through to Advanced Users* - NetConnect v2 is simple enough for the beginner to use to connect to the Internet for the first time, but powerful enough for the advanced user who may require a dialup connection and local area network (LAN).

dopus magellan II new £49.95



program : dopus magellan II
version : v5.8
format : floppy disks
available : yes
awards amiga format gold, 95%

Directory Opus Magellan II is a complete Workbench replacement and/or file management based system. Magellan-II offers everything from file management (copy, rename, view, extract etc), dock bar creation (create your own dock bars - to launch programs, commands, scripts), advanced FTP functionality (with asynchronous operation), custom themes (24 bit icons, different backdrops, custom sounds and scripts, improved user and start menus (ala Windows start menus), greater lister functionality (with full drag and drop), custom menus and much more. Magellan-II is indispensable. Once installed and used, you will never want to go back to your 'original' Workbench ever again.

stfax professional £29.95



program : stfax professional
version : v3.7
format : floppy disks
available : yes
awards amiga format gold, 95%, cu amiga 95%
amiga magazin (DE) 89%, Amiga Plus (DE) 96%

STFax Professional is a commercial fax/voice message program which enables you to use your Amiga as a digital answermachine. Send and receive faxes, create a simple or advanced tree based digial answer system for family members, create a fax on demand service, log numbers via caller-ID, call screen or blacklist phone numbers, setup a mini-BBS, use your modem as a telephone, control other programs etc.

- *Full fax modem support (class 1, 2, 2.0)* - fax from your favourite Amiga software
- *Advanced voice capabilities* - use your Amiga as an advanced (or simple) digital answermachine
- *Support for the PACE Solo, 3-Com Message Plus or Kortex Adaptix Independent Operation mode*
- *Mini-BBS* - setup your own small BBS
- *ScanQuix support* - use ScanQuix to directly scan documents from your scanner into STFax!

genesis £29.95



program : genesis
version : v1.0
format : floppy disks
available : yes
awards



Genesis is a new TCP/IP stack for the Amiga computer, allowing both dialup Internet access and local area networking, with the advanced facility to run more than one interface at one time (ie. keep your ethernet network connected, whilst putting your dialup connection on and offline - ideal for Siamese users, LAN'ing one or more Amiga's or an Amiga to PC/Unix/etc).

amigawriter £49.95



program : amigawriter
version : v1.2 (english version)
format : floppy disks
available : yes
awards amiga magazine (DE) 87% 'very good'.

AmigaWriter is the newest word processor (or word creating) package for the Amiga. Officially ratified by Amiga International, thus supported by the "*Powered by Amiga*" logo, AmigaWriter contains some unique features for Amiga word processors: platform independent (full support for commercial, shareware or freeware plugins), ease of use (easy selection, true WYSIWYG, very Amiga-alike in action), full paragraph control, page formatting, chapter management, support for different image formats and much more. All version 1 users will receive the forthcoming version 2 free of charge (due late 1999).

free unlimited internet access new

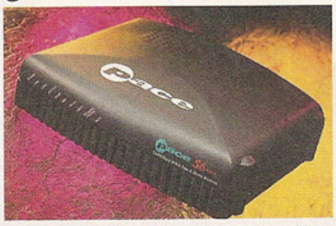
There has never been a better time to connect to the Internet - now it is completely free of charge! That's right: no connection fee, no on going service charge (except for your phone bill) and absolutely no hidden costs. We now provide details on how to connect your Amiga to the top three free-of-charge Internet service providers. These provide full connectivity: analogue and digital (ISDN) dialup, free web space (10-15MB), unlimited email addresses, full newsgroup access and more. Buy software or a modem pack from us and get connected, free of charge, immediately. All our packs are supplied with all the information you need to connect to the Internet.

FREE4ALL
FREEOnline.net
free serve

high quality modems from £69.95

Choose from three high-quality **branded** modems - the top of the range, award winning PACE 56K, the new PACE 'Solo' 56K or the middle of the range Dynalink 'MagicXpress' modem (well built, compact design, same colour as your Amiga). All ship with a five year warranty. The PACE modem's additional features include free lifetime technical support, UK caller ID (only modem available which supports this), a superb speakerphone and volume slider/control. All PACE and Dynalink 'MagicXpress' 56K modems are now v90 shipping ready - the agreed standard for 56K connectivity. Why not treat yourself to the brand new PACE 'Solo'? The 'Solo' can be used standalone from your Amiga. Want to go on holiday but need to receive fax and voice messages, but don't want to leave your Amiga running? The 'Solo' is the answer.

pace External 56K Modem



pace 'Solo' 56K Modem



Dynalink 56K External Voice/Fax/Data Modem	£69.95
PACE 56K External Voice/Fax/Data Modem	£119.95
PACE 'Solo' 56K External Voice/Fax/Data Modem	£189.95

modem pack options from £79.95

Various money saving packs are available. These are all based on the Dynalink v90 modem. Packs based on PACE 56K or PACE 'Solo' 56K modems available as an additional cost option.

Code	Pack Contents	£ Prices
PK01	56K Modem & STFax Professional	£ 79.95
PK02	56K Modem & NetConnect	£ 94.95
PK03	56K Modem & NetConnect & STFax Professional	£105.95
PK04	56K Modem & NetConnect, IOBlix-S, STFax Pro	£129.95
PK05	56K Modem & NetConnect, IOBlix IO, STFax Pro	£169.95

ADD £40 for a PACE 56K Modem (instead of the Dynalink 56K)
ADD £110 for a PACE 'Solo' 56K Modem (instead of the Dynalink 56K)
DEDUCT £30 for a Hypercom 3+ card (instead of the IOBlix IO card)

- All packs come with **free**, unlimited Internet connection - three options available
- Choose between the CD or Floppy disk version of NetConnect v2 with your modem pack

home highway - ISDN from £89.95

With the launch of BT's 'Home Highway', ISDN is now affordable for the home user. Our branded Dynalink 'MagicXpress' terminal adaptor enables you to connect to the Internet at blazingly fast speeds (you need a high speed serial card to use ISDN). Various ISDN packs are available:

Code	Pack Contents	£ Prices
ID01	External ISDN Terminal Adaptor (TA)	£ 89.95
ID02	ISDN TA & NetConnect	£114.95
ID03	ISDN TA & NetConnect & IOBlix-S	£149.95
ID04	ISDN TA & NetConnect & IOBlix IO zorro card	£179.95

- All packs come with **free**, unlimited Internet connection - one option available
- Choose between the CD or Floppy disk version of NetConnect v2 with your modem pack

high speed serial cards from £39.95

The new ***IOBlix*** card offers 4 high speed serial ports and 1 (2nd port option) high speed EPP/ECP parallel port to your zorro based Amiga. The parallel port offers both uni and bi-directional modes offering compatibility for all printers. Parallel ZIP™ driver included. The ***IOBlix*** also has a modular interface. Two modules are currently being developed: an AHI-compatible sound card and a SANA-II compatible ethernet card (the ***IOBlix-E***, due soon). The ***IOBlix A1200-S*** offers 1 high speed serial port, the ***IOBlix 1200-P*** offers 1 high speed parallel port. Both designed for A1200 towers. The new ***Hypercom 3+*** offers 2 high speed serial ports and 1 high speed uni/bi directional parallel port.

Model	Machine	Specifications	Price
IOBlix-S	A1200-T	1 x 460,800bps highspeed buffered serial port	£39.95
IOBlix-P	A1200-T	1 x uni/bi 500k bytes/sec parallel port	£39.95
Hypercom3+	Zorro-2/3	2 x 460,800bps highspeed buffered serial ports, 1 x uni/bi 500K parallel port	£69.95
IOBlix	Zorro-2/3	4 x 460,800bps highspeed buffered serial ports, 1 x uni/bi 500k parallel port	£89.95
IOBlix-E	Zorro-2/3	Ethernet module for IOBlix zorro IO card	£ call

miscellaneous software

Various other individual software titles are available. These titles may be interesting to those not wanting to purchase NetConnect v2.

	By Disk	By EMail
Scalos - workbench replacer with advanced features	£20.00	£18.00
Voyager Next Generation	£22.00	£20.00
Microdot-II v1.1 (release) - email and news client	£22.00	£20.00
AmIRC	£22.00	£20.00
AmFTP	£20.00	£18.00
AmTalk	£17.00	£15.00
X-Arc - system archive management tool (handles lha, lzx and zip archives)	£17.00	£15.00
Contact Manager - system addressbook, works with many net/comms programs	£12.00	£10.00
AmTelnet + AmTerm Package Deal	£20.00	£18.00

- *5% Discount when 2-4 Vapor products are bought, 10% Discount for 5+*

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Fax: 01325 460117
E-Mail: sales@active-net.co.uk
http://www.active-net.co.uk

Delivery Information

S'Ware	- £1.00 for UK delivery - £3.50 for EU (recorded) - £4.00 ROW (recorded)
H'Ware	- £6 for UK next day delivery (serial cards charged at £3 for recorded delivery)

Make cheques/P.O.'s payable to Active Technologies and send to the address listed opposite. Credit/debit card payment accepted. For any additional information contact us.

AMIGA FORMAT 1999 Reader Survey

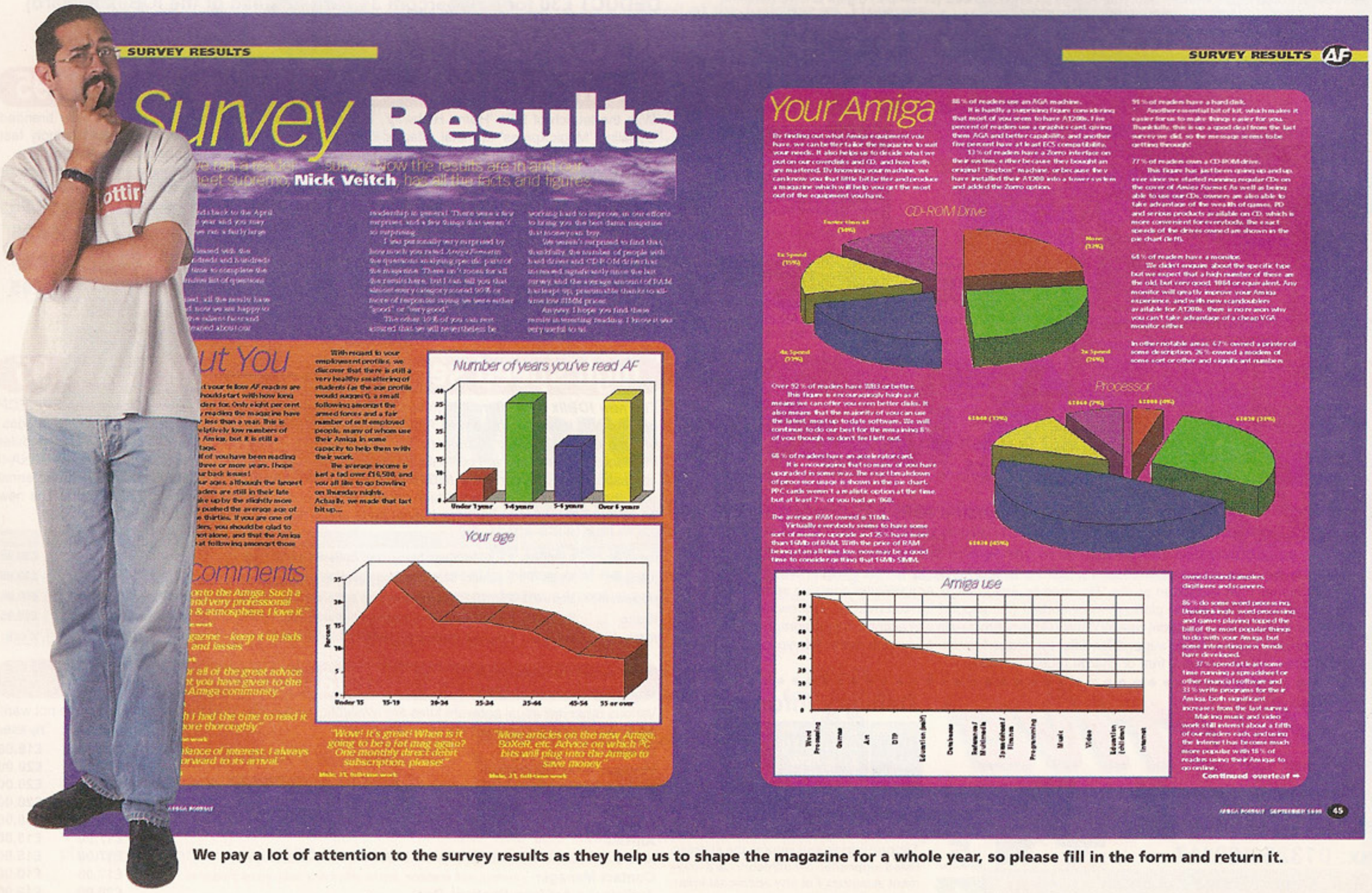
It's time to give the vital statistics of the Amiga world an update by filling in this survey, says **Ben Vost.**

You know the drill, we do this every year. Send in the survey so we can try to work out exactly what an "average" Amiga is. We need entries from all and sundry this time to get a better feel for what passes for your Amiga, rather than just getting entries from those who wish to boast, or those with plenty of time on their hands, so get filling in. Please.

Last year's survey results indicated a pleasing increase in the level of your computers, prompted, I'm sure, by reduced costs. Where once we would have found even hard drives a rarity, they're almost ubiquitous these days, and we're hoping that this year we can say the same for CD-ROM drives too, especially in light of the fact that one will be needed if you're to run WB3.5. Funnily enough, you'll also need Kickstart 3.1 to be able to run the new operating system, so I also expect a sharp upturn in the number of people who are going to be running this version of the ROM.

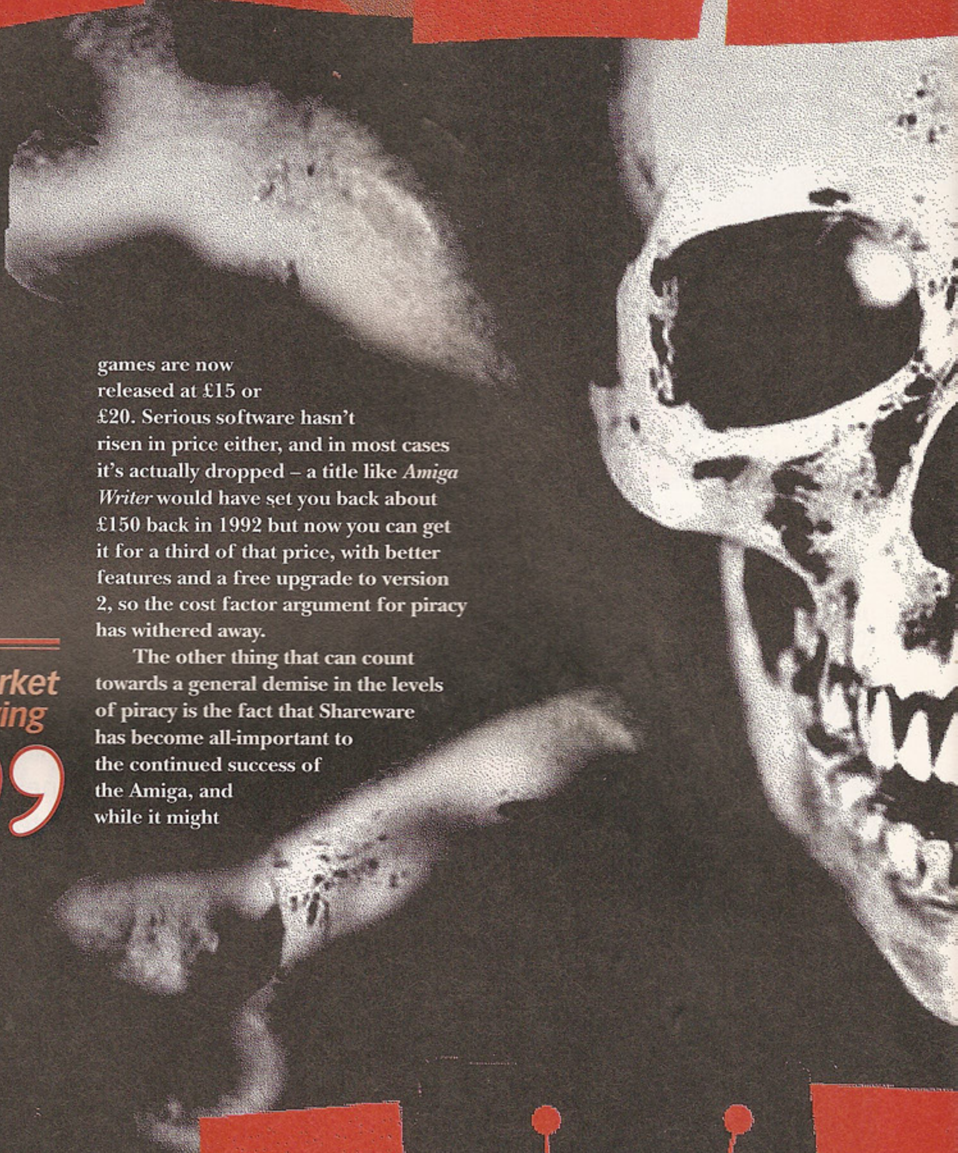
We're using pretty much the same questions as last year in order to compare the surveys more accurately, although references to other Amiga magazines have sadly been removed.

In any case, we'll be very interested in hearing what you have to tell us about your machines.



We pay a lot of attention to the survey results as they help us to shape the magazine for a whole year, so please fill in the form and return it.

PIRACY



There's no 'yo-ho-ho' when it comes to piracy on the Amiga. **Ben Vost** reports on why it's more of a threat to our platform than ever.

Had *Amiga Format* written an article about software piracy back in the heyday of the Amiga, circa 1992, it might have taken the attitude that software companies were at least partly responsible for the problem. We would have concluded that perhaps the prices asked for games and other software were somewhat high, and that this contributed to the whole piracy issue. Fortunes were certainly made in those days – companies like Psygnosis, Westwood Interactive and Electronic Arts may now be known to all and sundry around the world, but they wouldn't have been able to get where they are today without blockbuster Amiga titles like *Lemmings*, *Dune II* or *Deluxe Paint* making them the money which they did.

> "Everyone in the Amiga market today is staying alive, relying on every sale made to keep their businesses going..."

These days, however, games tend to be low cost affairs. While top titles like *Napalm* or *Foundation* still cruise at around the £30 mark, many Amiga games are now released at £15 or £20. Serious software hasn't risen in price either, and in most cases it's actually dropped – a title like *Amiga Writer* would have set you back about £150 back in 1992 but now you can get it for a third of that price, with better features and a free upgrade to version 2, so the cost factor argument for piracy has withered away.

The other thing that can count towards a general demise in the levels of piracy is the fact that Shareware has become all-important to the continued success of the Amiga, and while it might

AMI

What do you think?

IAN AISBITT:
I personally think piracy stinks. There are still too many Amigans prepared to get a pirate copy of a program rather than pay the Shareware fee. However, a lot of Shareware authors aren't very realistic. I for one have been caught out twice sending cash through the post, by which I mean I've sent currency and then not received the registered version of their software and thus lost the money.

SIMON FINNIGAN:
Even with all the problems the Amiga is having, it's still as easy as ever to get pirated software for it. I know of at least three local BBSes in the Liverpool

is it killing THE GA?



Skull image: Tony Stone Images

be guilt-assuaging to picture a software company as a bunch of fat cats with big cars, a Shareware author generally stands alone and is quite likely to be a student. It's hard to take a "Robin Hood" attitude to their efforts.

But hang on a second. Let's examine the situation for games and serious software companies and developers in the current Amiga market. Do we see them driving around in big cars or smoking huge cigars? I should think not. Everyone in the Amiga market today is staying alive, relying on every sale made to keep their businesses going, so no Robin Hood there either. Doesn't look like Amiga pirates have much of a leg to stand on.

There isn't any gross profiteering going on in the Amiga software market, so you'd expect piracy to be a bit of a non-starter on the Amiga these days, right? Unfortunately that isn't the case at all, with idiotic malcontents still boasting about how they've cracked so-and-so's protection, or worse yet, spreading panic and viruses on the back of certain TCP stacks.

It's not just commercial software that gets targeted either these days.

Continued overleaf ➡

JARGON

PIRATE
Anyone who copies software and gives it to someone else, or who receives and uses such software.

SPREADER
Someone whose job is simply to propagate the dispersal of this pirated software.

CRACKER
A misguided coder who breaks protection routines on software.

ELITE
The fools who pirate software often gather themselves into little clans and call themselves The Elite.

WAREZ
Any pirated software, on any platform at all.

CRACK
This can either be a verb, as in "to crack a program you need to..." or a noun, referring to a piece of software as being "cracked".

ELITE SPEAK
Letters are often replaced by numbers or symbols and cases are mixed in order to give a more "unique" impression. Well-known examples are "d00dZ" (dudes), "m8" (mate), "eL1T3" (Elite) and so on.

area that have large Amiga warez sections. There is nowhere near as big a problem on the Internet as far as I've seen. So far I haven't seen a single piece of Amiga warez on the net (I have looked as well) and I've been on the Internet for about two and a half years now.

I think the biggest problem for the Amiga in terms of warez is simply the size of the files. I can download *Siamese 2.5* in 4 minutes over a normal 33.6K modem, which costs me 5p maximum, compared to God only knows how much to buy. The PC at least has the advantage that the files are so huge that it gets impractical to download the files for yourself, so a number of people have bought CDR drives for the express intention of making their own warez CDs and selling them to pay their phone bill.

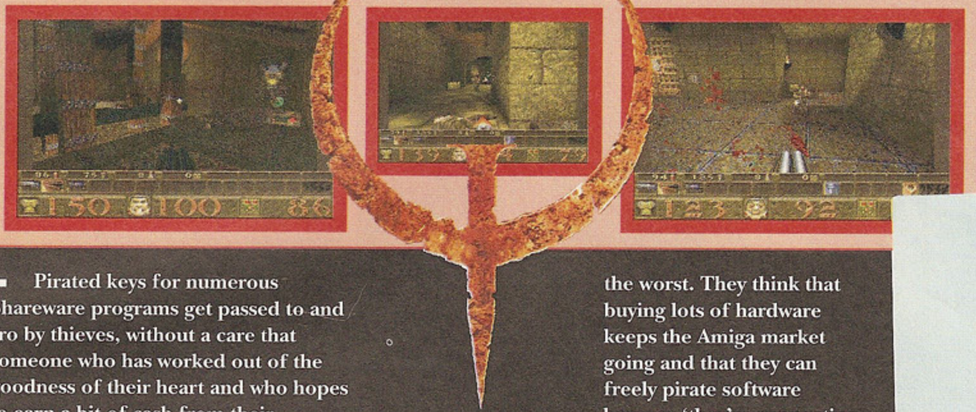
I have to be honest and say that the main reason I stopped using Amiga warez was because of the state of the market. I have no problem at all ➡

TO QUAKE OR NOT TO QUAKE?

One of the seeming grey areas of piracy is very obvious on the Amiga: *QuakePPC*. While clickBOOM ported *Quake* to the Amiga's standard 68K processor, some people maintain that they also promised to port it for the nascent PPC market. While I have no recollection of clickBOOM actually promising to port the software, they did make noises about creating it for the PowerPC, after *Myst*. However, whether they do or not, it remains to be said that *QuakePPC* is a pirated bit of software. There's absolutely no excuse for using what is definitely stolen source code, regardless of clickBOOM's position on the topic. Even if users are buying the full 68K *Quake* in order to get the .PAK files needed to play the full game, this still doesn't make it right to use the *QuakePPC* ports. If and when iD Software release the source code for *Quake*, legal ports to the PPC will then be possible.







Pirated keys for numerous Shareware programs get passed to and fro by thieves, without a care that someone who has worked out of the goodness of their heart and who hopes to earn a bit of cash from their programming is going to lose out because of this piracy.

> *"They think that buying lots of hardware keeps the Amiga market going and that they can freely pirate software…"*

Chris Wiles from Active Technologies told us about his experiences of piracy with *NetConnect 2*, the universally lauded Internet software suite:

"Some countries are worse than others. For example, we get very little piracy from Ireland, New Zealand or America, but central European countries are the worst. They think that buying lots of hardware keeps the Amiga market going and that they can freely pirate software because 'they're supporting the market'."



He also said that the most galling thing was the people "who ring up or email us for support with obviously pirated keyfiles. They even ask for updates to the software because of bugs they've supposedly found".

Unfortunately, Chris' experiences are far from uncommon. I spoke to Michael Garlich of Titan Computers about *Shadow of the Third Moon*, the game they brought out early last year. It was very popular, but only with pirates, it seems. Michael told me that they'd only sold about 1,000 copies worldwide and that the programmers of the game reversed their decision to create a sequel in disgust. The same is true the world over. GPSoftware took the bold decision to put a trojan horse into their superlative *Directory Opus* software that reacts badly to a pirated serial number being used, in an effort to prevent the widespread piracy of that title.

What's worse is that it's quite hard to police. In these days of the Internet where ftp sites can be anywhere, the crime often has an international flavour and it's very difficult and expensive to prosecute over national boundaries.

This doesn't mean that it hasn't been done, and although stories about the various law enforcement agencies being apathetic abound, including those



Purchasing blank disks or CDs is much cheaper than actually paying for software, but it's also wrong.

with PC warez since the market is so much bigger (look at the size of Microsoft and then tell me that piracy is really hurting them, for example), but on a machine like the Amiga, piracy is just stupidity.

GARETH MURFIN:

I think people think Shareware warez aren't as bad as commercial warez, but in fact it's worse in some respects. The Amiga market is largely bedroom coders who don't have a publisher and who rely on people registering the software. When they see people pirating it they're very hurt and out of pocket, so they might not code any more. They may also move to a new platform which they think has more potential sales – on the PC piracy is probably as bad if not worse than on the Amiga, but with such a large user base you're bound to get more registration fees.

A PIRATE:

CDs could have kept the Amiga alive as they slowed down piracy, especially playground piracy. However, Amiga companies didn't take enough advantage of CDs while the Amiga still had a fair share of the market. Most people have copied a music tape, recorded a CD to tape, encoded or played an MP3, recorded a film off TV and watched it more than once or even photocopied a book. All this is breaking copyright which amounts to piracy. I feel that the industry should make a better effort.

PAUL BRAZIER:

I think most piracy will be confined to games. On the Shareware side, I try to register for all the programs I regularly use but, believe me, it's not easy to do living here [South Africa]. Nobody wants South African Rand and the banks don't want to transfer money so I usually have to wait until relations send Sterling for birthdays, then send English money for registrations.

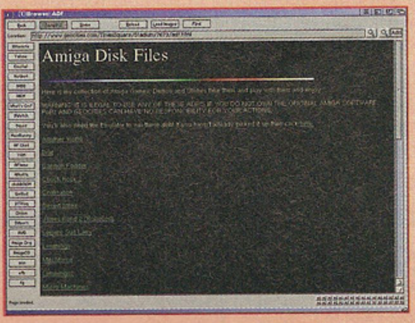
AN EX-PIRATE WHO HAS GROWN UP:

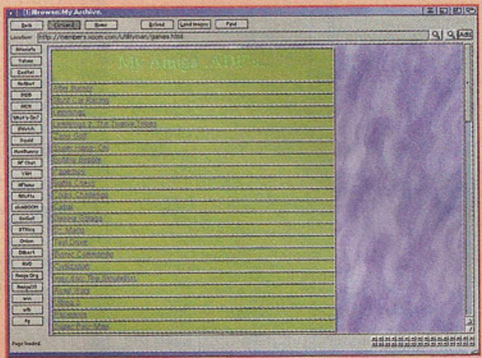
I, and most others I know, have really turned our ways against piracy. It's wrong, however you want to try to justify it, and it only serves to damage the one computer platform we place any value in at all.

There's all this talk of piracy on the Amiga, and yet surely this is now really a thing of the past as there are fewer users, less software and the cracking crews have migrated to the PC. Not on your life! Piracy of Amiga

ADF FILES

There's a new way of pirating Amiga software available now. ADF files are disk images of older Amiga programs, often games, designed for use with *UAE* or *Fellow*, the Amiga emulators for platforms like the PC. Before anyone jumps off into the deep end, some of these ADF files are legal and they've been created with the blessing of their original creators. There are others, like versions of Workbench and Kickstart ROMs, for instance, that are in no way legal, and it's these that should be watched out for. The best legal way of getting an Amiga on a PC is to buy Cloanto's *Amiga Forever* CD which has officially licensed versions of Workbench and ROMs.





Although they aren't all illegal, there are numerous websites offering pirated software.

about Britain's anti-piracy initiative FAST, this shouldn't stop you from calling your local police station and trading standards offices if you discover a pirate in operation. As long as you don't specifically mention what computer platform these people are pirating, I've found that the police have been quite keen to appear in their local paper with plastic bags filled with CDs and floppies. They'll contact your local trading standards authority, but they also recommend that you do too.

It may seem to be a double standard, when people turn a blind eye to people taping CDs or getting the Macintosh OS and ROMs from someone to use on their Amiga, but it isn't really. These things are wrong too.

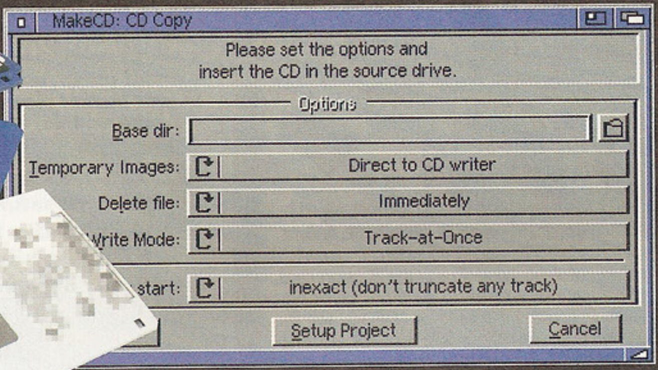
There's no grey area here – piracy is wrong in whatever form it takes. The major difference is that piracy on the Amiga is not only wrong, it's threatening the existence of the machine. Piracy is still killing the Amiga and it's doing a better job of it now than it ever has done before. We can all sneer at the posters that say "Home taping is killing music" when it obviously isn't, but we shouldn't sneer at anyone who refuses to pirate their Amiga software. They might just be the ones who are keeping the platform alive.

> "The major difference is that piracy on the Amiga is not only wrong, it's threatening the existence of the machine."

WHAT TO DO

If you have information that someone is a pirate, you should collect the evidence you have and pass it onto the police in the area where the pirate is. They'll probably ask you to talk to their local trading standards authority too, so you may have to make a couple of long distance phone calls. You can get these numbers from Directory Enquiries.





Unfortunately, it's now easier and cheaper than ever to copy CDs.

games, utilities, system software and Kickstart ROMs has suddenly taken off again with a vengeance. The difference between this and previous forms of piracy is that it's now in the open, not an underground activity.

The people grabbing the software don't give a stuff about the state of the Amiga market on the whole, and for the most part probably don't even know they're involved in mass piracy. I'm talking about the emergence of numerous Internet web\sites hosting hundreds of game images in ADF (Amiga Disk Format) files for use with the current Amiga emulators that have become available for the PC.

The task of converting these images back to an Amiga disk is academic provided you have the software. I've tested a few of these and it becomes immediately apparent that most of these ADFs are images of the old cracks of yesteryear. I've also tested these images on the PC emulators, and in most cases the cracker's intro screen never shows up so the user has no idea the game is actually cracked.

SIMON JENKINS:

I've used pirated software. I can understand why people are using, say, a copy of a game instead of the original because the games do cost quite a bit of money. The latest CD-ROM games cost anything around the £30 mark which, although they do come on a CD, is still a bit much to ask. On the subject of Shareware, people might not register because of the simple fact that they can't afford it, or they begrudge paying anything up to £30 to have the full program, or a keyfile to bring the program up to a full one. I had to pay £20 to register *AmIRC 2*. I would love to register all my Shareware software but I simply can't afford to do so.

ROB MARRIS:

I haven't pirated anything since I was about 17 (7 years ago) and never intend to again. Programmers getting ripped off by pirates may be unfair, but the main motivation for me not pirating these days is that if we don't buy the software, they won't keep developing it. I imagine this is the case for most ex-game pirates.

MALCOLM CAMPBELL:

I think software piracy is generally a bad thing. I say generally because if it wasn't for all those free pirate games that my friends used to buy at market stalls, they would never have considered buying an Amiga.

EYELINE

Bringing you the latest Amiga News from Eyetec

Latest News in Brief

OS 3.5 UPGRADE PREPARATIONS

With OS 3.5 having been 'outed' at last - and on track for delivery in a few months time - now is the time to start preparing your A1200 to be OS 3.5-ready.

According to Amiga International, a realistic configuration for acceptable performance is:

'030 Accelerator & 8mb - ACC-030-40-1S £59.95 + mem
3.1 ROMs - SYS-KS31-ROM £24.95 (ROMs only) or SYS-KS31-MPUG £49.95 (including WB 3.1 disks and Magic Pack software)
Scandoubler/Flickerfixer - EZVGA range from £48.95
Modem - MOD-56K 56K external modem with cables - £69.95

To take full advantage of OS 3.5, AI recommends:

'060 Accelerator & 32mb - ACC-060-50 £249.95 + mem
16-bit sound card - ADPT-AUD-PL12-DT £129.95
I/O Accelerator - INT-SER-PTJR £29.95 (Voucher price)

We will be shipping OS 3.5 (estimated price £34.95) from the date of its official release. Why not place an advanced order to ensure you get your copy at the earliest opportunity?

SPECIAL EASTER DISCOUNTS AVAILABLE UNTIL 30 APRIL 1999

EDVA

Ben Vost has twisted our arm and persuaded us to give you an Easter present - in the form of discounts worth up to £110 in total - against some of our most popular products. Full details are in the News Section of this issue of Amiga Format. Look for the Easter Discount Voucher Applies logo.

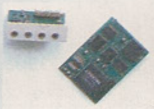
17" MONITORS DOWN IN PRICE AGAIN

The price of larger monitors continues to fall as they start to become shipped as standard with mid-level PC systems. Reflecting this we have reduced the price of the regular 17" monitor to £199.95 (from £248.95 in December) - with a further £10 reduction if you use the coupon in the News Section of this issue of Amiga Format.

If you are thinking of investing in a high quality graphics card - such as the BVision, then it is worth considering a high grade engineering-workstation-type monitor, such as the 17" model we have advertised for £399.95 (£389.95 with voucher). This quality of monitor is normally priced in the range of £600-£800

Note that not all PC monitors meet their listed specification and as a result fail to work correctly with Amiga scandoublers/flickerfixers in all modes. All our monitors have been selected to be fully compatible with the EZVGA SD/FF range.

AF GOLD FOR PRELUDE 1200



In a three page review in the April 1999 issue of AF, Tony Horgan - 'Mr Music' of the Amiga magazine world - concluded that the Prelude1200 was "Easily the best A1200 audio expansion we've seen so far" giving it an AF Gold award.

COMPATIBILITY KITS POPULAR A1200 ADD-ONS

Current accelerators, internal flickerfixers, the BVision card, the IDE Flyer, video slot adaptors, Zorro adaptors, clock port accessories, Catweasles and other add-ons all vie for the A1200's real estate, and often there is a level of electrical incompatibility as well.

The range of potential conflicts - and their resolution - is too large a subject to cover in an advertisement feature such as this: it will however form one of the items covered in a forthcoming Eyeline Direct (See separate news story). Suffice it to say that we at Eyetech have been working with many of the suppliers to produce work-arounds to most potential conflicts - so please ring for advice if you have (or suspect you will have) compatibility problems between any of your A1200 peripherals. In most cases we will be able to advise you how to get around the problem.

NETCONNECT 2.2 INTERNET SUITE NOW SUPPLIED WITH EYENET PACKAGES



If you are not yet on the Internet, now is the ideal time to sign up. Just £139.95 gets you a 56K modem, the Netconnect 2.2 internet software suite and a full internet connection with 10 email addresses, 25MB web space and unlimited web access with no ongoing charges (other than 0845 local call charges) ever! And, unlike other 'free' services, there is no extortionate support charges to get your Amiga set up, and no requirement to supply a personal profile for direct mail/email advertisement use by the ISP. In fact, the whole Eyetech package with modem and Amiga software costs less than many ISP's charge for 12 months connection alone!

LIMITED EDITION 1260/75LC 60 MIPS ACCELERATOR

Now available from Eyetech - at a price lower than that of the 1260/66!

The fastest 680x0 accelerator for any Amiga is now available (exclusively) from Eyetech. Rated by Sysinfo at around 60 MIPS the accelerator is suitable for both desktop and towered A1200s. The integer processing speed of the 75MHz 060 is - in Simon Goodwin's words - 'awesome', being up to 2200% faster than that of an ar 030/50!

The 1260/75 LC comes with a full MMU but no FPU as no internal or external Motorola FPU module will work at these speeds . As most Amiga software is supplied with non-MMU versions, these should still easily out-perform the FPU versions on a lesser processor in all but a handful of cases. And now for the best news of all. You can have the fastest O/S-compliant Amiga on the planet for just £299.95!

Amiga International recommend an '060 processor to get the most out of OS 3.5 - see separate news story.

EYELINE *Direct*

A monthly Amiga newsletter delivered to your door for just 25p a copy!

In the fast changing world of computers and peripherals, and with an ever-expanding portfolio of Amiga products, we are finding it increasingly difficult to provide Amiga owners with comprehensive technical and pricing information via our monthly advertising pages alone.

That's why we are launching Eyeline Direct - a monthly newsletter for Amiga users full of hints and tips, in-depth technical information on our latest products and - of course - up-to-date pricing information. In addition it has a section devoted to monthly special offers which will only be available to Eyeline Direct subscribers.

The normal price of Eyeline Direct is just £6.00 for 12 issues including UK postage - but if you subscribe before 30 April 1999 we will send you all 12 issues for half price - that's just 25p per copy including postage!

As well as our current product range we will be including a section on the answers to the most frequently asked questions on our support line - and top hints and tips from other Amiga users - so you can build up an easy-to-access reference manual for your A1200.

To subscribe to Eyeline Direct just ring the Eyetech sales team on 01642 713185 or write or fax us enclosing your delivery address and payment (cash, stamps or postal order please unless part of a larger order). EC customers please add £3, Worldwide please add £6.

ENTRY LEVEL EZPC TOWER SYSTEMS NOW AVAILABLE FROM JUST £599.95

UPGRADE PACKS FOR EXISTING EZTOWER USERS JUST £499.95

The EZPC-Pro Tower configurations (featured on the next page) have produced a tremendous level of interest - and orders - from professional and serious home Amiga users alike. We have also had many requests for a lower cost, entry level solution, from those Amiga users whose budget is more modest. So here it is - the EZPC-SLE - giving most of the potential of the EZPC-Pro systems (featured opposite) in an affordable (but expansible) package.

The EZPC-SLE specification is as follows:

- ✔ Full EZTower Mk4 with removable side panels & 250w PSU (not with upgrade kit)
- ✔ PC Keyboard & EZKey-SE/PC keyboard adaptor (not with upgrade kit)
- ✔ 100MHz-bus speed motherboard with 333MX CPU, 1MB cache memory & 4 x UDMA IDE ports
- ✔ 2 x high speed serial & 1 x EPP parallel port
- ✔ 32MB 100MHz memory
- ✔ 8MB SVGA SIS Graphics
- ✔ 16 bit 3D sound record and playback
- ✔ 3.2GB UDMA hard drive
- ✔ 24 speed CDROM
- ✔ PC mouse
- ✔ Remote Amiga/PC keyboard switch
- ✔ Siamese 2.1 RTG serial Amiga-PC networking software and cable.

and, to display your Amiga output on a PC screen,

either

- ✔ a TV/Teletext tuner with 24-bit still & video capture and Amiga composite video input

or

- ✔ an Amiga EZVGA-INSD internal scandoubler and BMon switch

As with the EZPC-Pro Tower systems - a collection, installation and delivery service is available - please ring for details.

You will also need to have Windows 9x operating system and an SVGA pc monitor - see the panel about the EZPC-Pro Tower system opposite for details.

EZBus-Z4 - A new Zorro adaptor from Eyetech featuring regular Z2 slots and 2x 19MB/s local bus connectors

EZTower-Z4 - A new EZTower specifically designed to take the EZbus-Z4

EZBus-Z4 Zorro-4 adaptor alone	£149.95
EZBus-Z4 introductory price - advanced orders	£129.95
EZTowerZ4, k/b adaptor, PC k.b	£129.95
EZTowerZ4, k/b adaptor, PC k.b & EZBus-Z4	£249.95
As above - introductory price - advanced orders	£199.95
Video adaptor (needed for SD/FF options)	£29.95
24-bit local-slot graphics card - target price	£ 99.95

BMON - A FAMILY OF MONITOR SWITCHES FOR THE BVISION, CYBERVISION & OTHER GRAPHICS CARDS

Following the release of the BVision in late December 1998, Eyetech has completely redesigned its BMon range of high quality video switches to cater not just for the BVision, but for all Amiga graphics cards and scandoubler/flickerfixer combinations.

The BMon takes two video inputs - one from an Amiga's AA chipset (either directly or via a scandoubler/flickerfixer) and the other from a graphics card (BVision, Cybervision, Picasso, Ateo bus card etc) - and switches your SVGA or multisync monitor between them. The BMon uses high quality video switchers so - unlike conventional switchboxes - there is no loss of quality from either source. It can also be used - in its SMon form - for switching an SVGA monitor between a PC and Amiga system.

As standard the BMon accepts input from a BVision or Cybervision card and from an Eyetech EZVGA internal flickerfixer-2 . It is manually switched by a remote miniature toggle switch positioned - for example - on the front panel of a tower system. An optional automatic switch controller is currently under development and can be easily added later.

The BMon comes in a self-contained plastic case (approx 55x50x15mm) and attaches to the back of the case using Velcro strips. It can easily be mounted inside a tower system using any available 15pin 'D' type knock-out on the tower's rear panel.

The BMon is available in six different configurations to suit most graphics card/Amiga video configurations as follows:

AMIGA CHIPSET CONNECTION	23pin D-M RGB	15pin HD-F SVGA	EZVGA INFF-2
GRAPHICS BVision, CyberVisionPPC	ADPT-VGA-BMON/A	ADPT-VGA-BMON/V	ADPT-VGA-BMON/F
CARD TYPE: Ateo, Picasso, PC gfx card etc	ADPT-VGA-SMON/A	ADPT-VGA-SMON/V	ADPT-VGA-SMON/F

The BMon, complete with manual change-over switch & indicator and EZVGA INFF-2 connecting lead (ie part number ADPT-VGA-BMON/F) is priced at just £39.95. Please see the price list on page 4 of this advert for other prices.

A1200 EZTower systems, EZPC Tower systems, Magic Packs and accessories

EZPC-PRO A1200 TOWER EXPANSION CONFIGURATIONS

3 new pre-configured systems to suit different applications and pockets

The EZPC system works by making the PC motherboard act as a slave processor to your A1200 - looking after the the operation of the systems accessories whilst you and your Amiga get on with creative work. (You can of course use the PC as a computer in its own right if you really insist!)

Its also important to understand that EZPC A1200 expansion system is based on a real Amiga and is not at all comparable with other PC-only systems running a clever, but slow, Amiga emulator as a PC application.

In fact there are such a range of applications that the EZPC system can open up to an Amiga user that we have introduced three systems pre-configured for different types of use. These are:

A1200 EZ-PC TOWER-HSE (Home Studio Edition). £999.95

The HSE configuration comes complete with TV tuner with cut-and-paste teletext facilities, 24-bit video frame grabber and video clip capture card, 30 bit colour scanner, 56K modem and unlimited internet access at local call rates - as well as the standard EZPC system components

A1200 EZPC TOWER-DVE (Digital Video Edition). £1369.95

The DVE is fitted with a purpose-designed, hardware-based MJPEG non-linear video editing suite for home/semi-professional video production. It also comes with built-in CD Writer/ReWriter (with drag-and-drop CD writing software) for producing your own audio and video CDs.

A1200 EZPC TOWER-XLS. £1995.95

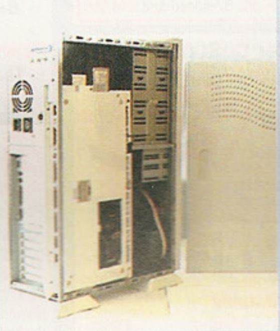
This must be the ultimate creative multimedia expansion platform for your A1200. It comes equipped with non-linear video editing hardware and software, A4 30-bit flatbed scanner, DVD ROM hardware & MPEG 2 decoder (for DVD video playback), CD ReWritable drive, 15" Colour Monitor, 56k data/fax/voice modem with voicemail and internet software - and much more.

A1200 EZPC TOWER-3.1+. £395.95

Finally, if your A1200 is feeling a bit tired we can supply your chosen EZPC Tower system with a brand new Kickstart 3.1 A1200, complete with Magic Pack software, 24 Speed CDROM, 3.2 GB hard drive (with W/b & Magic Pack software preinstalled), EZCD Mk4 interface and EZIDE software ready installed and connected up. All you need to do is to slot in your existing accelerator, fit your old hard drive into the external mounting drawer provided (see photo) switch on and start using your new A1200 EZPC Tower system.

EZPC-Pro Tower Model	HSE	DVE	XLS
EZPC-Tower/250W psu/PC mouse/HD floppy	Yes	Yes	Yes
EZ-Key k/b adaptor PC k/b & rem switch	Yes	Yes	Yes
Ultra DMA hard drive 4.2GB	Yes	Yes	Yes
32-speed CDROM	Yes	Yes	n/a
DVD-ROM(inc 20xCDROM capability)	n/a	+£79.95u/g	Yes
CDReWriter(inc 6xCDROM) & s/w	n/a	Yes	Yes
10 x blank CDR's 650MB	n/a	Yes	Yes
100Mhz bus PC m'board w/64MB	Yes	Yes	Yes
High perf high res 3D Gfx card w/MPEG-1	Yes	Yes	Yes
TV/teletext/framegrabber	Yes	n/a	n/a
Hardware MJPEG Video Editor	n/a	Yes	Yes
Hardware MPEG-2 Video decoder	n/a	+£59.95	Yes
CD-quality sound card with MIDI	Yes	Yes	Yes
Software controlled Amiga/PC audio mixer	Yes	Yes	Yes
Internal 60W PMPO monitor speakers	Yes	Yes	Yes
Siamese RTG2.5 software	Yes	Yes	Yes
Amiga PCMCIA & PC ethernet cards/cabs	Yes	Yes	Yes
30-bit high res A4 flatbed scanner	Yes	+£59.95	Yes
Internal 56k data/fax/voice modem	Yes	+£49.95	Yes
Unlimited access Internet package	Yes	+£49.95	+£49.95
15" SVGA monitor	+£109.95	+£109.95	Yes
17" SVGA monitor	+£189.95	+£189.95	+£99.95
Win 9.x/Lotus Smartsuite bundle	+£99.95	+£99.95	Yes
Miami Amiga TCP/IP stack	+£24.95	+£24.95	Yes
Cost with options as specified	£999.95	£1369.95	£1999.95





The EZPC Tower system showing the A1200, the PC rear sockets and card slots and removable side panels



All these three packs are designed for you to fit your existing A1200 in the EZPC Tower and connect it up. This normally takes around an hour, but if you would prefer to receive your system ready to use, we can arrange to collect your Amiga, do the work for you and ship your new system back all ready to plug-in to mains and phone outlets! Please ring for details.

AMIGA 1200 Magic Packs

Direct to Eyetech from Amiga International Inc.

- Full UK specification with Kickstart 3.1/Workbench 3.1 disks and manuals. UK PSU, mousemat, TV lead and 2mb graphics memory (in addition to any memory expansion included in the packs below).
- Fantastic software bundle including Wordworth 4SE, Turbocalc 3.5, Datastore 1.1, Photogenics 1.2SE, Personal Paint 6.4, Organiser 1.1, Pinball Mania and Whizz.
- Hard drive versions come with Scala MM300 pre-installed.
- Other options available, eg EZ-Tower Magic Pack bundles from £299.95 - ring for details.
- Time-of-purchase upgrade packages available at very special prices - see asterisked* items in the 'Pack' boxes below.



Eyetech Starter Pack & Starter Pack-Plus

Diskette based system as above — Just £179.95
CDROM-ready, 170MB HD system as above — Just £248.95
(New! HD pack now includes EZCD buffered i/f and ext'l CDROM socket)
Upgrade HD system to a 24-speed CDPlus unit with PSU for just £59.95

Eyetech Productivity Pack 3

170MB HD,030/40MHz/MMU/FPU/8MB — Just £299.95
U/g to an '040/25MHz/MMU/FPU w/16MB & 100W PSU for just £99.95*
&/or upgrade to an EZTower-Plus with EZKey & PC k/b for just £110.00*
(New! HD pack now includes EZCD buffered i/f and ext'l CDROM socket)

Eyetech MiniTower Pack 3

3.2GB HD, '040/28MHz/MMU/FPU/16MB, 24-speed CDROM, EZCD-Mk4 4-device buffered i/f & cables, EZIDE s/w, MiniTower case with 230W PSU — Just £598.95
Upgrade to an '040/40-SE/MMU/FPU with 32MB for just £69.95*

Eyetech Professional Pack 3

4.3GB HD, '040/40-SE/MMU/FPU/32MB, 24-speed CDROM, EZCD-Mk4 4-device buffered i/f & cables, EZIDE software, EZTower case, Amiga k/b & i/f, 250W PSU — Just £798.95
Upgrade to a 160MHz PPC & '040/25MHz/MMU/FPU w/64MB for £129.95*
. . . &/or add a 14" Monitor & Scandoubler for just £129.95*

The New Eyetech Mk 4 EZTower System - from just £79.95 - or £99.95 including keyboard & keyboard interface

Thinking of towering up your A1200? Then you should certainly be considering the unique Eyetech EZTower System

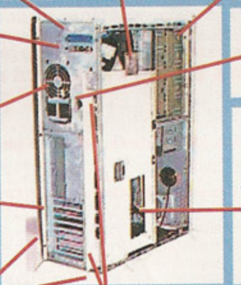
"This is definitely one of the easiest solutions to building your own Tower" - Amiga Format
"The Eyetech Tower offers clever solutions with a Velcro easyfit mentality" - CU Amiga

- ✔ **The easiest way to re-house your A1200 by far**
- ✔ **Expand your system with EZPC or Zorro slots**
- ✔ **250 W PSU with PC and Amiga power connectors**
- ✔ **No expensive PCMCIA right-angle adaptor required**
- ✔ **Available in 5 models to suit different skills and budgets**
- ✔ **The only tower allowing both PC & A1200 in one case**

	Backplate kit	DIY* EZTower	Full EZTower
DFO: face plate & ribbon cable	Yes	Yes	Yes
Custom backpanel w/SCSI, audio KOs	Yes	Yes	Yes
A1200 power & LED adptrs	Yes	Yes	Yes
CE-approved metal PC case	n/a	Yes	Yes
No of bays/PSU capacity	n/a	9/250W	9/250W
Directly accessible PCMCIA slot	Yes	Yes	Yes
DIY assembly instructions	Yes	Yes	n/a
Installation instructions	Yes	Yes	Yes
PC board/Siamese compatibility	Yes	Yes	Yes
Assembled & A1200-ready	No	No	Yes
Eyetech installation option	No	No	Yes
Cost with options as specified	£39.95	£79.95	£99.95
With EZKey2/PC k/b (w/A4k k/b+£20)	n/a	£99.95	£119.95

*With the DIY EZ-Tower you have to remove the PC tower back panel and some internal shelving and fix the new back panel in place

* Optional extra not included in standard EZTower system



AMIGA SVGA MONITORS

For use with Amiga Zorro & the new PPC Graphics Cards, Scandoublers & the EZPC-Tower system

- ✔ Special pricing on scandoublers/flickerfixers bought with monitors from just £45 extra
- ✔ Monitor specifications are quoted as the highest vertical refresh rate at the maximum resolution. Higher refresh rates (>=72Hz) at lower resolutions are available and give a more visually relaxing display.
- ✔ Scandoubler/flickerfixers have resolutions governed by the Amiga's AA/AGA chipset and are restricted to a maximum vertical refresh of 73Hz and a maximum usable resolution of 724Hx566V.
- ✔ The PPC BVision supports 1600x1280@72Hz. You will not gain the fu benefit of this superb graphics card without a monitor that supports this resolution at that refresh rate.

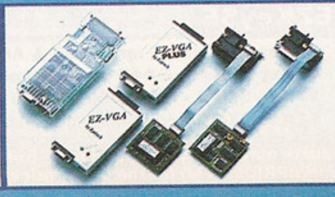


14" SVGA 0.28DP, 1024Hx768V @ 60Hz £89.95
15" SVGA 0.28DP, 1024Hx768V @ 60Hz £119.95
17" SVGA 0.28DP, 1280Hx1024V @ 60Hz £199.95
Engineering workstation grade monitor:
17" SVGA 0.26DP, 1600Hx1280V @ 75Hz £399.95

EZVGA Scandoublers & Flickerfixers from just £48.95

All scandoublers/flickerfixers allow the Amigas 15khz modes to display on a PC SVGA monitor. Flickerfixers allow 15kHz interlaced screens to be displayed, rock-steady, at twice the standard vertical resolution. Other modes are passed through unaltered.

EZVGA-Mk2	Compact, external upgradeable scandoubler (to full flickerfixer)	£69.95
EZVGA-Plus	Compact, external scandoubler with full flickerfixer	£99.95
EZVGA-SEFF	Economy external scandoubler with full flickerfixer	£89.95
EZVGA-INSD	Internal A1200/A4000 scandoubler (not upgradeable)	£48.95
EZVGA-INFF	Internal A1200/A4000 scandoubler with full flickerfixer	£79.95



Peripherals & Storage

AWARD-WINNING UMAX SCSI FLATBED SCANNER



- 600 x 300dpi optical resolution, single-pass 24-bit A4 flatbed scanner
- Comes with Photoscope (Amiga) and Mac software. Compatible with all modern SCSI interfaces - including PPC, Blizzard & Classic Squirrel (but not Surf-Squirrel)
- PCW 'Best Scanner of 1998' Award - July 1998; PCW 'Best Scanner' September 1998
- Highly-acclaimed ArtEffect-SE v1.5 (normally £59.95) free with this bundle whilst stocks last . . . .

EDVA

Amiga UMAX Scanner & PhotoScope Bundle now with FREE ArtEffect-SE v1.5 - still just £179.95

The Top-Rated CD-Plus Range for the A1200

"Eyetech have come up with a real winner with this new CDROM drive" - Ben Vost, AF

If your A1200 hasn't got a CDROM then you don't know what you're missing!

At these prices there is really no excuse!



- ✔ Whisper quiet 24 or 32-speed CDROM mechanism
- ✔ EZCD-Mk4 4-device buffered interface, 3-connector 40-way and 2-connector 44-way cables included
- ✔ CDPlus driver software specially written for Eyetech by the author of IDE-fix
- ✔ Optional Amiga and CDDA audio mixer with Gold phono audio jacks - just £14.95 each
- ✔ 20-watt CE-approved PSU complete with 13A plug.
- ✔ Optional upgrade to MiniTower or Desktop case with 230W PSU (which can also hold extra drives and power your Amiga) just £20 extra!
- ✔ **2 Free CDs whilst stocks last**

Complete CDPlus Systems: 24-speed just £74.95; 32-speed just £84.95

Bare mechanisms for tower: 24-speed just £34.95; 32-speed just £44.95!

A1200 EZWriter and EZReWriter CDROM Burners

Make your own music and data CD's, back up data for less than 0.15p/MB . . .



- ✔ Both are IDE/ATAPI reader/writer units with MakeCD Amiga writing software
- ✔ EZWriter units cut 'Gold' CD blanks at 2x speed & read CDROM's at 8 speed
- ✔ EZReWriter units cut 'Gold' CD blanks and CD rewritable disks at 2x speed and read conventional CD's at 6 speed
- ✔ Gold 650MB CD blanks (for use with either model) are available at ten for £10 at time of purchase
- ✔ CD rewritable disks are just £5 each when bought with the EZReWriter

EDVA

EZWriter/EZReWriter Options

EZWriter-Bare	for A4000 or A1200 Tower (bare drive - no MakeCD)	£179.95
EZWriter-INT	for A4000 or A1200 Tower (with MakeCD)	£209.95
EZWriter-SE	External A1200 unit with separate 100w PSU	£249.95
EZWriter-Gold	External A1200 unit with int 40w PSU, Gold Audio skts	£279.95
EZWriter-MT	Mini-Tower-cased unit with 230w PSU which can house an additional LS120/Zip/CDROM & power your A1200	£269.95
EZReWriter-Bare	for A4000 or A1200 Tower (bare drive - no MakeCD)	£199.95
EZReWriter-INT	for A4000 or A1200 Tower (with MakeCD)	£238.95
EZReWriter-SE	External A1200 CD ReWriter with separate 100w PSU	£279.95
IDE interfaces	EZCD-SE I/F, 44-way & 40-way cables & CDROM s/w -	add £20
if required . . .	EZCD-Mk4 I/F, 44 & 40-way cables & EZ-IDE s/w -	add £30
	IDE-Flyer or IDE-Express I/F, cables & s/w -	add £50

Complete A1200 IDE solutions . .

- ✔ All drives come ready to use with WB3.0 pre-installed & WB2.x install script
- ✔ All drives over 200 MB come with over 45 top quality utilities (not shovelware) and MMe multimedia authoring s/w pre-installed, configured & ready-to-run

LS120 & Zip Drives (ATAPI i/f & EZIDE needed)

LS120 (HD Floppy/120MB Cart) -	£79.95	3 x 120MB carts	£29.95
Zip Drive (Mac emul. compatible) -	£79.95	3 x 100 MB carts	£29.95

TowerDrives (3.5" drives, 25mm high)

2.1GB - £89.95 3.2GB - £109.95 4.3GB - £129.95



2.5" InstantDrives for the A600/A1200/SX32

20MB	Entry-level drive for the SX32/A600	£29.95
170MB	Entry-level drive for the SX32Pro/A1200	£49.95
260MB	Entry-level drive for the SX32Pro/A1200	£59.95
720MB	A drive for serious A1200/SX32 Pro users	£99.95
1.4GB	A high performance drive for power users	£129.95
3.2GB	Ultra slim drive for A1200/600/SX32	£179.95

EZGen Amiga Genlock

lower price



EDVA

Superimposes Amiga-generated graphics on a composite PAL video stream. Just plug in and go!

- ✔ Substitutes incoming video for any 'transparent' colours in your paint package, titling or multimedia presentation software.
- ✔ Create stunning transition and titling effects with packages such as Scala MM300 (which is included with A1200 hard drive Magic Packs).

Now just £69.95

Turn your CD32 into an A1200!

- ✔ All models come with keyboard, hard & floppy drive, serial, parallel, RGB & VGA video interfaces
- ✔ Pro models have '030 40MHz or 50MHz cpu and optional PC keyboard i/f. Pro-50 has full MMU.
- ✔ Mk2 takes up to 8MB & FPU; Pro models take up to 64MB & FPU.



The SX32 Pro-50

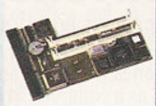
SK32 Mk2	£149.95		
SX32 Pro50	£249.95	SX32 Pro40EC	£199.95

Accelerators & Interfaces

Apollo Accelerators for the A1200

NEW.

1230/40 TURBO PRO MK3



High performance 1 or 2 simm entry level accelerators for A1200 desktop consoles or tower systems

MMU, FPU & 1 SIMM socket to 32MB only **£59.95**

MMU, FPU & 2 SIMM sockets to 64MB only **£69.95**

A1240/28	'040/28MHz/MMU/FPU*	(21 MIPS)	£127.95
A1240/40SE	'040/40MHz/MMU/FPU*	(30 MIPS)	£167.95
A1240/40	'040/40MHz/MMU/FPU*	(30 MIPS)	£184.95
A1260/50	'060/50MHz/MMU/FPU*	(39 MIPS)	£264.95
A1260/66	'060/66MHz/MMU/FPU*	(51 MIPS)	£349.95
A1260/75LC	'060/75MHz/MMU*	(60 MIPS)	£299.95

EDVA

*To 32MB. Optional 2nd simm socket (tower only) offers 64MB total

The Apollo A1260/75LC is the fastest Operating System-supported Amiga accelerator currently available

Tip: Buy your memory with the accelerator to ensure full compatibility

20% off memory prices when bought with an Apollo or phase5 accelerator

phase5 PowerUp A1200 PPC + '040/'060 Accelerators

Without SCSI (not upgradeable) inc. MMU & FPU

160 MHz 603e PPC	'040/25/MMU.FPU	only £199.95
160 MHz 603e PPC	'060/50/MMU/FPU	only £479.95
240 MHz 603e PPC	'040/25/MMU/FPU	only £319.95
240 MHz 603e PPC	'060/50/MMU/FPU	only £549.95



Add £69 to the above prices for factory fitted on-board Fast SCSI II Interface

Blizzard Vision PPC 8MB Graphics Card

Unbelievable quality and speed - 1600x1280@72HZ!

No Zorro slots needed!

NEW! 8mb card - £159.95 or just £139.95 with a PPC

The fastest, most highly specified graphics card you can buy for your A1200

A1200 Clock Port Expansion Cards

EDVA

For non-Zorro expansion A1200 owners the best expansion route is via the (unused) clock port

PortJunior	1x 460kb serial port	39.95
IOBlix1200S	1x 1.5 MB/s serial port	49.95
IOBlix1200P	1x EPP parallel port	49.95
(Drivers for PC parallel port scanners, Zip drives etc., available shortly)		
PortPlus	2x460kb ser & 1x800kb par port	69.95
Catweasel-2	HD Amiga/PC floppy controller	49.95
Prelude1200-DT	16-bit f/d sound card for desktop A1200	129.95
Prelude1200-TW	16-bit f/d sound card for tower A1200	149.95
ClockUp	4-way clock port expander	19.95

Parallel & Serial expansion for Zorro-based systems

IOBLIX expandable Z2 I/O card for Tower Systems 2xS, 1xP - £89.95

Complete A1200 IDE solutions . .

Abridged Guide to Buffered Interfaces

A buffered IDE interface is essential if you are considering expanding your A1200's storage capability. Not only does it give you the option to attach up to 4 hard drive/CDROM/LS120/Zip etc devices but it also protects your A1200 by putting back the buffering electronics that Commodore/AI left out of the A1200 design. Some interfaces can also significantly speed up the data transfer to and from your hard drive and/or CDROM ... but you will need to choose the right interface for your particular setup - see below, ring for details or send a stamped addressed envelope for an IDE Interface Fact Sheet. Note that the EZCD-SE is equivalent to the 'standard' interface offered by some other suppliers. See also the EZIDE software panel on this page.

NB If you are thinking of getting a hard drive larger than 4.3GB then get the IDE-Flyer or wait for OS3.5 which properly supports them and gives new, compatible versions of FFS, Format & HDToolbox programs

Interface	Max Xfer	Suitability
EZCD-SE	2MB/s	68030/40Mhz or slower / no accelerator.
EZCD-Mk4	3MB/s	68030/50, 68040/xx, 68060/xx accelerator.
IDE-Flyer	8MB/s	040/xx, 060/xx, UDMA HD & 24 speed+CDROM

EZCD Buffered Interfaces	SE	Mk4
4-Device Buff Interface & CDROM Software	£18.95	£28.95
CDROM s/w, 3x40 & 2x44-way cables	£28.95	£38.95
EZ-IDE s/w, 3x40 & 2x44-way cables	£38.95	£48.95
Elbox IDE Flyer I/F& CDROM file system (>4.3GB HD Support)		£54.95

EDVA | Easter Discount Voucher Applies

EZKey2

- ✔ Autodetects and remaps Amiga & PC keyboards
- ✔ Plugs directly into the ribbon cable slot on the A1200

EZKey2 alone - for A1200 only - just	£28.95
EZKey2 and Windows keyboard	£38.95
EZKey2, A4000 k/b & 6-to-5 pin adaptor	£58.95

EZKeySE

- ✔ Separate models for Amiga & PC keyboards
- ✔ Amiga version & k/b detects all multi-key combinations

EZKey-SE/Amiga - for A1200 & A600 - just	£18.95
EZKey-SE/Amiga A4K k/b & 6-5 pin adaptor	£48.95
EZKey-SE/PC - for A1200 & A600 - just	£24.95
EZKey-SE/PC and Windows keyboard	£34.95

Due to variations in exchange rates the prices of some products may change - up or down - from the prices shown. Please ring or check our website [www.eyetech.co.uk/MAIN/APRICE.HTM] for the latest prices before ordering.

Software & Drivers

TurboPrint 7 - The essential partner for your digital imaging work



- ✔ The most comprehensive, fastest replacement printing system for all WB2.x+ Amigas
- ✔ Supports more than 70 printers including the latest models from Epson, Canon, HP printers - including the Award-winning Epson Stylus Photo series
- ✔ Integrates seamlessly with ScanQuix scanning software and CamControl digital camera software
- ✔ Poster printing, image tiling, colour correction, print spooling, multiple copies*, postscript emulator*, screen grabber*, photo optimisation etc, all included
- ✔ Selectable parallel device for use with high-speed interfaces such as the PortPlus & IOBlix1200P
- ✔ 20% off the price of the the PortPlus & IOBlix1200P when purchased with TurboPrint.

TB7 - £3
6-7 u/g - £1

Amiga Digital Imaging Software from Andreas Gunther

ScanQuix4 Software just £59.95 - Upgrades just £29.95



- ✔ 24 bit scanning with full range of editing options.
- ✔ Stand-alone use or integrates with your Art package (AdPro, ArtEffect, PPaint, Photogenics, ImageFX, XLPaint, Pagestream 3, DPaint5) via AREXX.
- ✔ 'Scan-to-disk' option in Jpeg or IFF.
- ✔ Unique calibration program which automatically compensates for scanner and printer deficiencies allowing photo-realistic output on any high resolution, Turboprint or StudioII supported, colour printer.
- ✔ Interpolated resolutions to 20000x20000 dpi.
- ✔ Colour photocopy option when used with a one-pass colour scanner
- ✔ Supports Epson, HP, Umax, and some Mustek & Artek SCSI scanners & Epson parallel scanners.(Umax ScanQuix4 is £69.95, Photoscope £59.95)
- ✔ Compatible with all modern SCSI controllers including PPC, Blizzard & Classic Squirrel (but not Surf-Squirrel).

CamControl Amiga Digital Camera Software - now just £29.95



- ✔ Serial connection versions available for most popular models of Kodak, Minolta, Olympus, Casio & Fuji digital cameras
- ✔ Picture transfer, camera control & sideshow options (camera dependant)
- ✔ Stand-alone use or integrates with your Art package (AdPro, ArtEffect, PPaint, Photogenics, ImageFX, XL Paint, Pagestream 3, DPaint 5) via AREXX
- ✔ Selectable serial device for use with high-speed interfaces like the PortJnr or IOBlix1200S
- ✔ 20% off the price of the the PortPlus & IOBlix1200S when purchased with CamControl software.

EZIDE - IDE/ATAPI ENHANCEMENT SOFTWARE

PROBABLY THE ONLY HARD DRIVE/CDROM/ LS120/ZIP/SYQUEST S/W YOU'LL EVER NEED

- ✔ Supports LS120, Zip, Jaz, Syquest, and other IDE/ATAPI removable cartridge drives AUTOMATICALLY. Cartridges just appear on the Workbench when inserted and disappear when ejected - just like a floppy disk. IDE ZipPrep tools are also included.
- ✔ Optimises hard disk performance automatically. Supports 'second channel' hard drives on most 4-device buffered interfaces.
- ✔ Extensive CDROM support including multidisk changers, CD32 emulation, high performance Mac, PC & Amiga CDROM filesystems, multisession and multivolume CDROM support.

EZ-IDE Amiga IDE, ATAPI, CDROM & removable media driver s/w	£34.95
If bought with any EZCD, I/F, Zip or LS120 Drive	£9.95
Upgrade from Eyetech CDPlus/IDE Fix software*	£14.95

(*trade in & proof of purchase required)

AMIGA MAGIC PACK UPGRADE PACKS AVAILABLE IN LIMITED QUANTITIES

The ideal way to update your Commodore A1200:

- 3.1 Kickstart ROMs
- Photogenics 1.2SE
- 3.1 Workbench (6 disks)
- Personal Paint 6.4
- Wordworth 4.5 SE
- Organiser 1.1
- Turbocalc 3.5
- Pinball Mania & Whizz
- Datastore 1.1
- Workbench 3.1 manuals
- Magic Pack application software manuals . . . . .



. . . . all for just **£49.95!!**

EYETECH GROUP LTD

The Old Bank, 12 West Green, Stokesley, North Yorkshire TS9 5BB, UK

Tel: 07000 4 AMIGA ~ 07000 4 26442 ~ +44(0)1642 713 185 Fax: 44(0)1642 713 63

Net: sales, info @eyetech.co.uk. www.eyetech.co.uk.

UK Bank/BS Cheques, Visa*, Mastercard*, Switch, Delta, Connect, Solo, Electron. Postal/Money orders accepted. (*A 3% charge applies to all credit card orders). Due to space limitations some of the specs given are indicative only - please ring/write for further details. Please check prices, specification and availability before ordering. **If ordering by post, please provide a daytime telephone number. Goods are not supplied on a trial basis**. A1200 items are tested with a Rev 1.D.1 motherboard - other boards may need modification. Items subject to manual wear & tear (eg keyboards) are limited to 90 days warranty on those components. E.&O.E. All prices include VAT at 17.5%. Orders sent outside the EC do not incur VAT - divide the prices shown by 1.175 to arrive at ex-VAT prices.

UK Next Day Insured Delivery Charges: Software/Cables, EZCD I/F = £3.00 2.5" Drives, Accelerators, Manuals = £7.00, 3.5" Drives, FDDs, PSUs, SX32 = £9.00, CDPlus, Minitower, Desktop = £11.00, EZTW & EZPC = £15.00. Worldwide in 2-7 days from receipt of faxed order & payment details.

EYETECH

EYETECH AMIGA PARTS & PRICE INDEX MAY 1999 TEL: +44 (0)1642-713-185 - 07000 4 AMIGA

nterfaces and Adapters: EZ-Key & DIY Tower Components

DPT-EZK2	Mk 2 Amiga/PC k/b adpt -> A1200 kbd direct connect	28.95
DPT-EZK2-A4K	A1200 EZKey MK2/6p -> 5p adptr/A4000 kbd bdle	48.95
DPT-EZK2-W95	Mk2 Amiga/PC k/b->A1200 dir connect +Win95 kbd	38.95
DPT-EZSE-A	EZKey-SE Amiga 5p DIN k/b adapter for A1200/A600	18.95
DPT-EZSE-A/K	EZKey-SE Amiga + 6p->5p adptr + A4000 kbd bundle	48.95
DPT-EZKSE-P	EZKey-SE PC 5p DIN k/b adapter for A1200/A600	24.95
DPT-EZKSE-P/K	EZKey-SE PC k/b adapter for A1200/A600 + Win95 kbd	34.95
DPT-HD-2/3	2.5"/44way -> 3.5"/40w+4w adpt & 2.5->3.5 mtg bracket	11.95
DPT-HD-3/5	3.5" Zip/SyQuest/FDD/HD brkt/pl ->5" bay	5.95
DPT-KBD-5P6P	Amiga/PC k/b adapter 5p din-F ->6p m/d-M	5.95
DPT-KBD-6P5P	Amiga/PC kbd adapter 6p mindin-F ->5pd-M	5.95
AB-KBD-MF	5p DIN M - 5p DIN F k/b ex cable 1.2m	7.95
DPT-DF0-FP	Tower faceplate adapter for A1200 int FD	4.95

nterfaces and Adapters: A1200 Ethernet, SCSI

DPT-PCM-ETH-C	PCMCIA ethernet card with Amiga/PC drivers	79.95
DPT-PCM-ETH-H	Hydra PCMCIA ethernet card with Amiga drvrs	129.95
AB-UPT-X60C	Crossed twisted pair/RJ45 for Sisys 60cm	6.95
DPT-SCS-CSQR	Classic Squirrel PCMCIA SCSI i/f 50pCM	69.95

F & Adapters: Flickerfixers, Genlocks, Video Digitisers GA Adapters, Monitor Switches, Monitor Leads

DPT-VGA-BV8M	BVision 8MB gfx card for A1200 (needs PPC)	159.95
DPT-VGA-BMON/F	SVGA Monitor Switcher - BVisn/CVisn & EZVGA INFF2	39.95
DPT-VGA-BMON/V	SVGA Monitor Switcher - BVisn/CVisn &15pHD In/Ex SD/FF	44.95
DPT-VGA-BMON/A	M/Sync Monitor Switcher - BVisn/CVisn & 23p RGB socket	44.95
DPT-VGA-SMON/F	SVGA MonSw - Ateo/Picasso 15pHD Gfx & EZVGA INFF2	44.95
DPT-VGA-SMON/V	SVGA MonSw - Ateo/Pic'o 15pHD & 15pHD In/Ex SD/FF	44.95
DPT-VGA-SMON/A	M/Sync MonSw- Ateo/Pic'o 15pHD & 23p RGB socket	49.95
DPT-VGA-AMON	Auto Amiga/CV64-3D m/sync monitor switch	39.95
DPT-VGA-M2SD	EZ-VGA-Mk2 compact external s/doubler PLL u/gradable	69.95
DPT-VGA-PLFF	EZ-VGA-Plus compact external SD+FF 23F-15F PLL	99.95
DPT-VGA-SDUG	SDBL2 to SD+flickerfixer u/g	40.00
DPT-VGA-INSD	EZ-VGA internal A1200 s/doubler non-upgrad'le	48.95
DPT-VGA-INFF	EZ-VGA- internal A1200 scandoubler w/ flickerfixer	79.95
DPT-VGA-INFF2	EZ-VGA- internal A1200 SD+FF for use with BMON	89.95
DPT-VGA-SEFF	EZ-VGA-SE scandoubler+flickerfixer 23F-15F Xtal	89.95
DPT-VGA-15M9F	Adapter from 15p HD-M VGA to 9pD-F	9.95
DPT-VGA-9M15F	Monitor adapter 9p D-F to 15p HD-M	9.95
DPT-VGA-15M23M	VGA 15pHD-M -> 23pD-M Amiga RGB adapter	14.95
DPT-VGA-UNBF	Amiga 23pD-F ->15pHD-F VGA adapter	12.95
DPT-VGA-BUF	Amiga 23pD-F ->15pHD-F buffered adapter for A4000	16.95
DPT-PGB-24RT	ProGrab 24-RT Amiga par. port video digitiser (no psu)	94.95
DPT-PGB-PSU	PSU for ProGrab 24-RT	9.95
DPT-GLK-COMP	EZ-Gen composite video Genlock for A1200	69.95

nterfaces and Adapters: A1200 Sound cards & software

T-AUD-PL12-DT	Prelude1200 for A1200 DT console only	129.95
T-AUD-PL12-TW	Prelude1200 for Tower w/ribbon cble/audio I/O brkt, CD i/f	149.95
T-AUD-PL12-UG	Upgrade node from PL12-DT to PL12-TW	19.95
T-AUD-PLZ2	Prelude ZorroII 16-bit full duplex sound card	189.95
SW-SMP-OP	Samplitude Opus 16 channel, virtual projects, FFT filtering	149.95
SW-SMP-LE	Samplitude-LE 4 channel , virtual projects, FFT filtering	49.95

F & Adapters - IDE/ATAPI & software

T-IDE-FLYR	Elbox 4-dev 32 bit high perf buf'd A1200 IDE i/f	54.95
DPT-FLR-SPC-SP	ROM spacers for Elbox IDE-Flyer purchased w/ IDE-FLYR	4.95
DPT-FLR-SPC	ROM spacers for Elbox IDE-Flyer purchased elsewhere	8.95
T-12I-EZCD4	Mk4 4-dev buf IDE i/f w/AIPU w/A1200 CDROM s/w	28.95
T-12I-EZCD4/C	Mk4 4-dev buf IDE i/f w/3x40, 2x44 13cm cabs, CD s/w	38.95
T-12I-EZCD4/CE	Mk4 4-dev buf IDE i/f w/3x40, 2x44 cabs, EZIDE	48.95
T-12I-EZCDSE	Economy 4-dev buf IDE i/f w/A1200 CDROM s/w	18.95
T-12I-EZCDSE/C	Econ 4-dev buf IDE i/f w/3x40, 2x44 13cm cabs, CD s/w	28.95
T-12I-EZCDSE/CE	Econ 4-dev buf IDE i/f w/3x40, 2x44cabs, EZIDE	38.95
T-4KI-CD4	4-device EIDE i/f for A4000 w/CDROM s/w	18.95
VR-EZIDE	EIDE/ATAPI HD/CDROM/ZIP/LS120/SyQst drvr	34.95
VR-EZIDE-CU	P/x upgrade to EZIDE from competitive product	14.95
VR-EZIDE-SP	EIDE/ATAPI enhancer/CDROM Software Bundle Price	9.95

F & Adapters - Serial, Parallel, Floppy & Clock port expanders

T-SER-PTJR	PortJunior - 460KB serial i/f for A1200	39.95
T-IOBL-S12	IOBlix 12S - 1.5Mbps serial i/f for A1200	49.95
T-IOBL-P12	IOBlix 12P - EPP parallel port i/f for A1200	49.95
T-SER-PTPL	PortPlus - 2x 460KB ser + 1x 800KB par i/f for A1200	79.95
T-IOBL-Z2	IOBlix Z2 - 4x1.5Mbpsser + 1x EPP par port ZorroII	89.95
T-IOBL-Z2PX	1x EPP par port expan for INT-IOBL-Z2 (to 4xs+2xP)	19.95
T-CLK-EXP	ClockUp 4-way clock port expander for A1200	19.95
T-FDD-DF0	Interface for std Sony FDD for DF0 880KB	9.95

Cables & Cable Adapters: Audio & Mains

AB-AUD-CD	CDROM invt'd T audio cab .6m + 2xRCA plg	9.95
AB-AUD-MIX	RCA(phono)-M -> RCA-M+RCA-F 'Y' mixer lead 1.8m	6.95
AB-AUD-2M2M	RCA(phono)-2xM -> RCA2xM stereo lead 1.8m	4.95
AB-AUD-MJ/PH	3.5mm st minijack->2xphono-M plugs 1.2m	5.95
DPT-AUD-RCA	RCA(phono)-M -> 2xRCA-F adapter 'Y' mixer	2.50
DPT-AUD-RCA-G	RCA(phono)-M ->2xRCA-F gold plated adapt 'Y' mixer	3.50
AB-IEC-1.5M	AC power cable 13A plug -> IEC skt 1.5m	2.95
AB-IEC-4X13	AC powerstrip 1xIEC-M -> 4x13A-F mains skt	14.95
LUG-IEC	Rewirable IEC monitor plg for PSUs/MT/DT	4.95

Cables & Cable Adapters: Serial, Modem, SCSI, Printer

AB-SER-EX2M	DB25-M -> DB25-F RS232 extn cab 2m	7.95
AB-SER-EX50C	DB25-M -> DB25-F RS232 extn cab 0.5m	6.95
AB-SER-NUL2M	Null modem cable w/ D9F & D25F at each end 2m	9.95
AB-SER-NUL5M	Null modem cable w/ D9F & D25F at each end 5m	14.95
AB-SER-NUL10M	Null modem cable w/ D9F & D25F at each end 10m	19.95
DPT-SER-25F9M	25p-F to 9pM serial RS232 adapter	4.95
DPT-SER-25M9F	25p-M to 9pF serial RS232 adapter	4.95
DPT-SCS-50/50CF	Centronics 50p-F to Centronics 50p-F (for Squirrel)	14.95
AB-SCS-25D/50C	SCSI cable DB25-M -> Cent50-M 1m	9.95
AB-SCS-25D/25D	SCSI cable DB25M-DB25M mac type 1m	9.95
AB-SCS-50C/50C	SCSI cable Centr50M->Centr50M 1m	9.95
AB-SCS-50H/50C	SCSI-2 cable 50h/pDM->Centr50M 1m for PPC	19.95
AB-SCS-50H/25D	SCSI-2 cable 50h/pDM->25D-M 1m for PPC	19.95
AB-PAR-FULL	Bidirectional printer cable all pins connected	9.95

Cables & Cable Adapters: VGA, Keyboard, Switchboxes, Cables, Scart Cables (See also BMON, SMON autoswitches above)

DPT-SW-S/K	Dual monitor & k/b switchbox	14.95
DPT-SW-S/K/M	Dual monitor, k/b & mouse switchbox	19.95
AB-KBD-MM	5p DIN M - 5p DIN M k/b cable 1.2m	7.95
AB-VGA-MF	15p DM-HD - 15p DF-HD VGA ext cable 2m	9.95
AB-VGA-MM	15p DM-HD - 15p DM-HD VGA cable 2m	9.95
DPT-SCAR-CMP	Amiga comp video (RCA)+2xAudio to SCART	12.95
DPT-SCAR-RGB	Amiga 23p+2xRCA to RGB TV SCART + audio	12.95

Cables: HD, CDROM, Floppy, Clock Port Data & A1200 HD Power

AB-PD-40F44F	2.5" (44F) to 3.5" (40F) data cab adapt for A1200 30cm	9.95
AB-PD-2F	Power splitter floppy drive to hard drive + floppy	9.95
AB-PD-30C	44->40way 3.5" HD data & pwr cabs - A1200	14.95
AB-HD-KIT	A1200 full 3.5" hard drive fitting kit	24.95
AB22-2W-9C	22way-F x2 A1200 clock port cable 9cm o/a	5.00
AB34-2W-50C	34way-F x2 FDD ribbon cable for tower 50cm	9.95
AB40-2W-20C	40 way IDE cable 2 connector 20cm	5.00
AB40-3W-1M	40Way IDE/HD/CD cable 3 connector 1m o/a len	9.95
CAB40-3W-60C	40w-F x3 HD/CD/IDE cable 20+40=60cm o/a	9.95
CAB40-CUST	Custom cable 3x40way IDE up to 1.5m	19.95
CAB44-2W-13C	44way (2.5" HD) cable 2 connector, 13cm o/a	9.95
CAB44-2W-60C	44way (2.5" HD) cable 2 connector, 60cm o/a	19.95
CAB44-3W-12C	44way (2.5" HD) cable 3 connector, 12cm o/a	12.95
CAB44-3W-24C	44way (2.5" HD) 7+17cm,3 connector,24cm o/a	14.95
CAB50-CUST	Custom cable 3x50way IDC SCSI + 1xCent50-F 60cm	19.95

Cables: HD, CDROM, Floppy Power Splitters - Tower Systems

CABPW-1W-1F	Power converter cab HD-M -> FD-F	4.95
CABPW-2W-1H1F	HD/FD power splitter HD-M->1xHD-F/1xFD-F	6.95
CABPW-2W-2F	FDD power splitter 4pM->2xFD-F	6.95
CABPW-2W-2H	HD/CD power splitter 4p-M ->2x 4p-F 15cm	6.95
CABPW-3W-2H1F	HD/FD power splitter HD-M->2xHD-F/1xFD-F	8.95
CABPW-3W-3H	HD power splitter HD-M -> 3xHD-F	8.95
CAB-HD-PWXTN	4p-M -> 4p-F HD/CD power cab ext 90cm	9.95
CAB-HD-FD/4	23p-M-floppy -> 4p-F HD/CD power 90cm	9.95

New - ISDN Term Adapters, 56k Modems & Net Access Bundles

NET-ISP	One time setup/support/unlimited usage/no ongoing net access charge (0845 call charges only) with 25MB web space, 10 email addresses, 90 days free net support.	49.95
NET-EYE-1	128Kbps ISDN T/A + NET-ISP as above	179.95
NET-EYE-2	128K ISDN T/A, Portjnr + NET-ISP as above	209.95
NET-EYE-3	128K ISDN T/A, Netconnect 2 + NET-ISP	219.95
NET-EYE-4	128K ISDN T/A, Portjnr, Netconnect 2 + NET-ISP	249.95
NET-EYE-5	56Kb fax/voice modem + NET-ISP as above	99.95
NET-EYE-6	56Kb fax/voice modem, PortJnr i/f + NET-ISP as above	129.95
NET-EYE-7	56Kb fax/voice mdm, Netconnect 2 + NET-ISP	139.95
NET-EYE-8	56Kb fax/voice mdm, PtJn, Netconnect 2 + NET-ISP	169.95
MOD-56K	56K Voice/Data/Fax Modem External inc serial cable	69.95
MOD-ISDN	128K External ISDN terminal adapter inc serial cable	139.95
NET-REF	Internet Reference Book by D. Winder	2.00
NET-NC2	Netconnect 2.2 software	49.95

lower prices

CDROM Systems including EZ-Tower & MT/DT Bundles

CD-SE-24X	CDPlus-SE system 24 speed with CDROM s/w	74.95
CD-SE-32X	CDPlus-SE system 32 speed with CDROM s/w	84.95
CD-DT/MT-24X	CDPlus Desktop/Minitower 24 x with CDROM s/w	94.95
CD-DT/MT-32X	CDPlus Desktop/Minitower 32 x with CDROM s/w	104.95
ADPT-AUD-CDSE	CDPlus-SE A1200/CD audio mixr/adapter	14.95
CAB44-CD-13C	44way (2.5" HD) cable purch with CD/HD 13cm	6.00
CAB40-DDC	A1200 IDE skt adptr 40F-40M with mtgs 15cm	9.95
CD24-BARE	Bare 24 speed CDROM mechanism for twr/A4k	34.95
CD32-BARE	Bare 32 speed ATAPI CDROM mechanism for twr/A4k	44.95

CDWriter/ReWriter Systems inc. EZ-Tower & MT/DT Bundles

CDR-BARE-2X8	EZWriter Mechanism (no MakeCD)	179.95
CDR-IN-2x8	EZWriter 2/8x with MakeCD for A4000,Tower	209.95
CDR-SE-2x8	EZWriter-SE external 2/8x with MakeCD	249.95
CDR-DT/MT-2x8	EZWriter Desktop/Minitower 2/8 speed with MakeCD	269.95
CDR-PL-2x8	EZWriter-Gold external 2/8x with MakeCD	279.95
CDRW-BARE-226	EZReWriter Mechanism (no MakeCD)	199.95
CDRW-IN-226	EZReWriter 2x2x6 w/MakeCD for A4k,Twr	238.95
CDRW-SE-226	EZReWriter-SE external 2x2x6 w/MakeCD	279.95
CDRW-PL-226	EZReWriter-Gold external 2x2x6 w/MakeCD	299.95
CDR-CDSE-UG	EZCD-SE+40+44way cabs + CDROMs/w w/CDR	20.00
CDR-CDM4-UG	EZCDMk4+40+44way cabs + EZIDE s/w w/CDR	30.00
CDR-CDFL-UG	IDE-Flyer high-speed IDE i/f, s/w, cabs purch w/CDR	50.00
CDR-DSK-10	Recordable CD media (WORM) 650MB x10	14.95
CDR-DSK-10-SP	Recordable CD media 650MBx10 pur w/EZWriter	10.00
CDRW-DSK	Single CDrewritable disk 650MB	9.95
CDRW-DSK-SP	Single CDrewritable disk 650MB pur w/EZReWriter	5.00
DVR-MCD-TAO-P	MakeCD TAO (P) Amiga CD rec s/w w/ATAPI	38.95

EZTowerZ4 Systems, Z4 busboard expansions

CASE-DTZ4	DIY EZTower-Z4 250W PSU, LED adpt, FD cab/fp	89.95
CASE-DTZ4-PL	DIY EZTower-Z4 250W PSU, EZKey, PC kbd, FD cab/fp	109.95
CASE-DTZ4-PLZ4	DIY EZTwr-Z4, EZKey, PC kbd, FD cab/fp Z4 slots	239.95
CASE-DTZ4-PLZ4-S	DIY EZTwr-Z4 & Z4 adapter as above until April 1999	199.95
CASE-RTZ4	Ready-to-Use EZTwr-Z4 250W PSU, LED adpt, FD cab/fp	109.95
CASE-RTZ4-PL	RTU EZTower-Z4 250W PSU, EZKey, PC kbd, FD cab/fp	129.95
CASE-RTZ4-PLZ4	RTU EZTwr-Z4 250W, PC kbd/adpt, FD cab/fp, Z4 slots	259.95
CASE-RTZ4-PLZ4-S	RTU EZTwr-Z4 & Z4 adapter as above until April 1999	219.95
ADPT-Z4	Z4 adapter for A1200 5xZ2, 2xZ2, 2xclock ports	149.95
ADPT-Z4-SP	Z4 adapter as above Ist 100 orders	129.95
CASE-FT-A4KUG	EZ-Tower upgrade from PC to A4000 k/b (time of purch)	20.00

EZTower Systems, MiniTower/Desktop Cases & Accessories

CASE-FT-DIY	EZTwr Mk4 kit w/250W, FD cab/fp, bkpl for self conv'n	79.95
CASE-FT-DIY-PLUS	EZTower kit w/250W PSU, EZKey, PC kbd, FD cab/fp	99.95
CASE-FT-RTU	Ready-built EZTower 250W PSU, LED adpt, FD cab/fp	99.95
CASE-FT-RTU-PLUS	Ready-built EZTwr w/250W, EZKey, PC kbd, FD cab/fp	119.95
CASE-DT	Desktop case with 200W+ psu for HD/CDROM	29.95
CASE-MT	MiniTower case wth 200W+ psu for HD/CDROM	29.95
CASE-FT-A4KUG	EZ-Tower upgrade from PC to A4000 k/b (time of purch)	20.00
CASE-FT-EXKT	EZ-Tower conversion kit - No PC Tower	39.95
ADPT-AUD-EZTW	EZTwr audio mixer/adapter for A1200/CDROM	14.95
ADPT-SCSI-EZTW	EZTwr SCSI adpt 30cm 2xCent50F, 1xIDC50F	14.95
ADPT-PWR-PPC	2nd A1200 m/bd powerfeed adapter (if req'd) for PPC acc	19.95
CAB-SER-SSQ	9pDM->9pDF SurfSq EZTwr ser extn cab 50cm	9.95

SVGA Monitors - require Scandoubler and/or Flickerfix to use all Amiga modes

MON-14-.28	14" dig SVGA 0.28DP 1024x768@60Hz	89.95
MON-15-.28	15" dig SVGA 0.28DP 1024x768@60Hz	119.95
MON-17-.28	17" dig SVGA 0.28DP 1280x1024@60Hz	199.95
MON-17-.26	17" dig SVGA 135MHz, 0.26DP 1600x1280@75Hz	399.95
ADPT-MON-SEFF	EZVGA-SE ext flickerfixer purch w/ monitor	85.00
ADPT-MON-M2SD	EZVGA-Mk2 ext s/dblr u/g'able purch w/ monitor	65.00
ADPT-MON-PLFF	EZVGA-Plus ext flickerfixer purch w/ monitor	90.00
ADPT-MON-INSD	EZ-VGA internal s/doubler purch w/ monitor	45.00
ADPT-MON-INFF	EZ-VGA internal f/fixer purch w/ monitor	75.00
ADPT-MON-INFF2	EZ-VGA internal f/fixer purch w/ monitor for BMON	85.00

Digital Cameras and Amiga Digital Camera Software

DVR-CAM-CAS	CamControl s/w for Casio QV10/100/300/700	29.95
DVR-CAM-FUJ	CamControl s/w for Fuji DS5/DS7 /DX7/DX9	29.95
DVR-CAM-KOD	CamControl s/w for Kodak DC20/DC25	29.95
DVR-CAM-MIN	CamControl s/w for Minolta Dimage V	29.95
INT-12I-PTJR-SP	PortJnr hi-speed ser i/f pur with CamControl s/w	30.00

Amiga Printer Software/Drivers

DVR-ENPR	EnPrint. Amiga printer driver for pre-03/97 Epson Printers	9.95
DVR-TBPR7	TurboPrint 7.x Amiga printer driver (English)	38.95
DVR-TB6/7-UG	TurboPrint 6.x to 7.x upgrade (Send TB6 disk w/order)	19.95

Amiga Image Conversion/Effects Software, Scanner Software, Scanner Bundles and Adapters

SCN-FBA4-BDL3	UMAX award-winning SCSI A4FB scanner with PScope	179.95

---------- Free ArtEffect-SE v1.5 with above whilst stocks last ----------

DVR-SQ4	ScanQuix4 + 1 driver (Epson/HP/Artec)	59.95
DVR-SQ4-U	ScanQuix4 + 1 driver (UMAX)	74.95
DVR-SQ4-UG	ScanQuix3 to SQ4 upgrade (trade-in & receipt reqd)	29.95
DVR-PHS	PhotoScope UMAX-SCSI Amiga Scanner Driver	59.95
CAB-SCS-25D/50C-S	SCSI cable DB25-M -> Cent50-M 1m pur with scanner	5.00
CAB-SCS-25D/25D-S	SCSI cable DB25M-DB25M mac type pur with scanner	5.00
CAB-SCS-50C/50C-S	SCSI cable Centr50M->Centr50M 1m pur w/scnr	5.00
CAB-SCS-50H/50C-S	SCSI-2 cable 50h/pDM->Cent50M 1m for PPC pur w/scnr	10.00
CAB-SCS-50H/25D-S	SCSI-2 cable 50h/pDM->25D-M 1m for PPC pur w/scnr	10.00
ADPT-SCS-CSQR-SP	Classic Squirrel PCMCIA SCSI i/f 50pCM pur w/scnr	54.95
ACC-SCS-BLM4-SP	SCSI/Simm socket for Bliz 1230/50 Mk4 pur w/scnr	59.95
ADPT-SCS-50/50CF-SP	Centronics 50p-F to Centronics 50p-F (SQ) pur w/scnr	7.50
ADPT-SQ3-PAR	SQ3 adapter Epson scanner ->parallel port cable	9.95
CAB-PAR-FULL	Bidirectional printer cable all pins connected	9.95

Hard & Floppy Drive, CDROM, LS120 & Zip Mech. & Cases

FDD-ITL-1200	Replacement A1200/600 int FDD 880KB	24.95
FDD-ITL-BARE	Bare 1.44/880 Sony FDD for tower (needs EZDF0/Catwsl)	19.95
FDD-ITL-D/C/I	Twr int 880Kb FDD(Sony/EZDF0/cab bundle)	29.95
FDD-ITL-D/I	Twr intl 880Kb FDD (Sony/EZDF0) No cable	24.95
HD2-21	21MB 2.5" hard drive 90 days warranty	29.95
HD2-170	170MB 2.5" hard drive	49.95
HD2-260	260MB 2.5" hard drive	59.95
HD2-1.4	1.4GB 2.5" hard drive for Amiga	129.95
HD2-3.2	3.2GB ultra slim 2.5"drive, 9mm high (2 fit in std A1200)	179.95
HD3-2.5	2.5GB 1"x3.5" IDE drive for tower	94.95
HD3-3.2	3.2GB 1"x3.5" IDE drive for tower	109.95
HD3-4.3	4.3GB 1"x3.5" IDE drive for tower	129.95
HD3-LS120	Panasonic LS120 floppy/optical 1.4/120MB	79.95
HD3-LS120-CT1	Single 120 MB cartridge for LS120 drive	14.95
HD3-LS120-CT3	3-pack of 120MB (nominal) LS120 carts	29.95
HD3-ZIP-CT1	Single 100MB (nominal) Zip cartridge	14.95
HD3-ZIP-CT3	3-Pack of 100MB (nominal) Zip cartridges	29.95
HD3-ZIP-IDE	Bare ATAPI/IDE Zip drive internal	79.95
CAB44-CD-13C	44way (2.5" HD) cable sold with CD/HD 13cm	6.00
CASE-ZIP	Metal slim case-FDD/IDEZip/SyQuest/LS120	9.95
CASE-HD-ECON	External 3.5" HD case no psu	19.9
CASE-HD-REM	Removable drive case for 3.5" HD (metal) no psu	24.9

Keyboards, Mice, PSU's, Misc. Hardware

FAN-60MM	Cooling fan for A1200 60x60x25mm 5/12v	14.9
KBD-A1000	A1000 keyboard with 6-pin mini-Din cntr	39.9
KBD-A1200	Replacement A1200 k/b w/ribbon cable	24.9
KBD-A4000	A4000 keyboard with 6-pin mini-DIN plug	34.95
KBD-WIN95	Windows 95 keyboard with 5-pin AT DIN plug	12.95
MOU-WHI	Amiga Mouse	6.9
PSU-100	100w PSU for Amiga (fit your old lead - inc instrns,cntrs)	29.9
PSU-200	200w PSU for Amiga (fit your old lead - inc instrns,cntrs)	39.9
PSU-230	200/250w replacement PSU for MT/DT/FT	29.9
PSU-A1200	A1200 23W PSU (original) 90 days warranty	19.9
SPK-16W	16W PMPO speakers w/ PSU 3.5mm jack, AC mains PSU	10.9
SPK-60W-INT	5.25" Bay Internal mounting 60W PMPO speakers/amp	24.9

Accelerators: PowerPC with 680x0 Co-processor

ADPT-VGA-BV8M-SP	BVision 8MB A1200 gfx card pur w/ PPC acc	139.9
ACC-PPC-16-4025	Bliz'd PPC603/160MHz+040/25/FPU/ no SCSI	199.9
ACC-PPC-16-6050	Bliz'd PPC603/160MHz+060/50/FPU no SCSI	479.9
ACC-PPC-24-4025	Bliz'd PPC603/240MHz+040/25/FPU no SCSI	319.9
ACC-PPC-24-6050	Bliz'd PPC603/240MHz+060/50/FPU no SCSI	549.9
ACC-PPC-16S-4025	Bliz'd PPC603/160MHz+040/25/FPU/SCSI-2	268.9
ACC-PPC-16S-6050	Bliz'd PPC603/160MHz+060/50/FPU/SCSI-2	548.9
ACC-PPC-24S-4025	Bliz'd PPC603/240MHz+040/25/FPU/SCSI-2	388.9
ACC-PPC-24S-6050	Bliz'd PPC603/240MHz+060/50/FPU/SCSI-2	618.9
ADPT-PWR-PPC	2nd A1200 m/bd powerfeed adapter (if req'd) for PPC acc	19.9

Accelerators: Apollo 680xx

ACC-060-75LC	Apollo '060 MMU 77MHz A1200 acc (lim avail)	299.9
ACC-060-66	Apollo '060 MMU/FPU 66MHz A1200 acc (lim avail)	349.9
ACC-060-50	Apollo '060 MMU/FPU 50MHz A1200 acc (lim avail)	267.9
ACC-040-40	Apollo '040 MMU/FPU 40MHz A1200 accel	184.9
ACC-040-40-SE	Apollo '040 MMU/FPU 40MHz A1200 accel (20% o/c)	164.9
ACC-040-28	Apollo '040 MMU/FPU 28MHz A1200 accel	124.9
ACC-030-40-1S	Apollo '030 MMU/FPU 40MHz A1200 accel 1 simm skt	59.9
ACC-030-40-2S	Apollo '030 MMU/FPU 40MHz 2 simm skt	69.9
ACC-4/60-SSKT	Apollo 1240/60 2nd simm socket & fitting	20.0

Memory: Simms, Zip RAM & FPU's - Please ring for latest prices

MEM-32MB-72P	72 pin 32 MB 32 bit simm for Amiga (+£10 for single sided)	54.9
MEM-16MB-72P	72 pin 16MB 32 bit simm for Amiga	34.9
MEM-8MB-72P	72 pin 8MB 32 bit simm for Amiga	24.9
MEM-4MB-72P	72 pin 4MB 32 bit simm 70 ns	14.9

WB Disks, Kickstart ROMS, Manuals etc

SYS-WB30-DSK	Amiga WB3.0 disksx5 + Eyetech HD install	9.9
SYS-WB31-DSK	Amiga Workbench 3.1 disks x6 (w/ HD inst)	14.9
SYS-KS31-ROM	A1200 Kickstart 3.1 ROM chips (2 chips)	29.9
SYS-KS31-SET	A1200 K/s 3.1 ROMs & WB3.1 dskx6 (no manuals)	36.9
SYS-KS31-MPUG	A1200 Mag Pk u/g 3.1ROMs,WB3.1,appln s/w, manuals	49.9

EZPC-Tower & Siamese Systems & Components

EZPC-SLE-CF1	EZPC SiSys RTG2.1entry level system	599.9
EZPC-HSE-CF1	EZPC SiSys RTG2.5 system Home Studio Edition	999.9
EZPC-DVE-CF1	EZPC SiSys RTG2.5 system Digital Video Edition	1369.9
EZPC-XLS-CF1	EZPC SiSys RTG2.5 system - ultimate Amiga expansion	1999.9
EZPC-AMP-CF1	A1200 Magic Pack/24x/3.2GB/etc EZPC-Tower upgrade	399.9
EZPC-SLE-CF1-UG	EZPC SiSys RTG2.1entry level u/g (no EZTWR/kb/adpt)	499.9
PSW-W9X/SS	Windows 9x & Lotus SmartSuite bundle	99.9
SYS-SIA-ETH	Siamese System2.5 w/PC, Amiga ethernet	189.9
SYS-SIA-R25	Siamese System software RTG v2.5	99.9
SYS-SIA-R21	Siamese serial s/w RTG v2.1 (ref'ble agnst v2.5)	19.9
SYS-TCP-MIA	Miami TCP/IP stack for Amiga (reg'n fee paid)	24.9

CD32, SX32 & Accessories

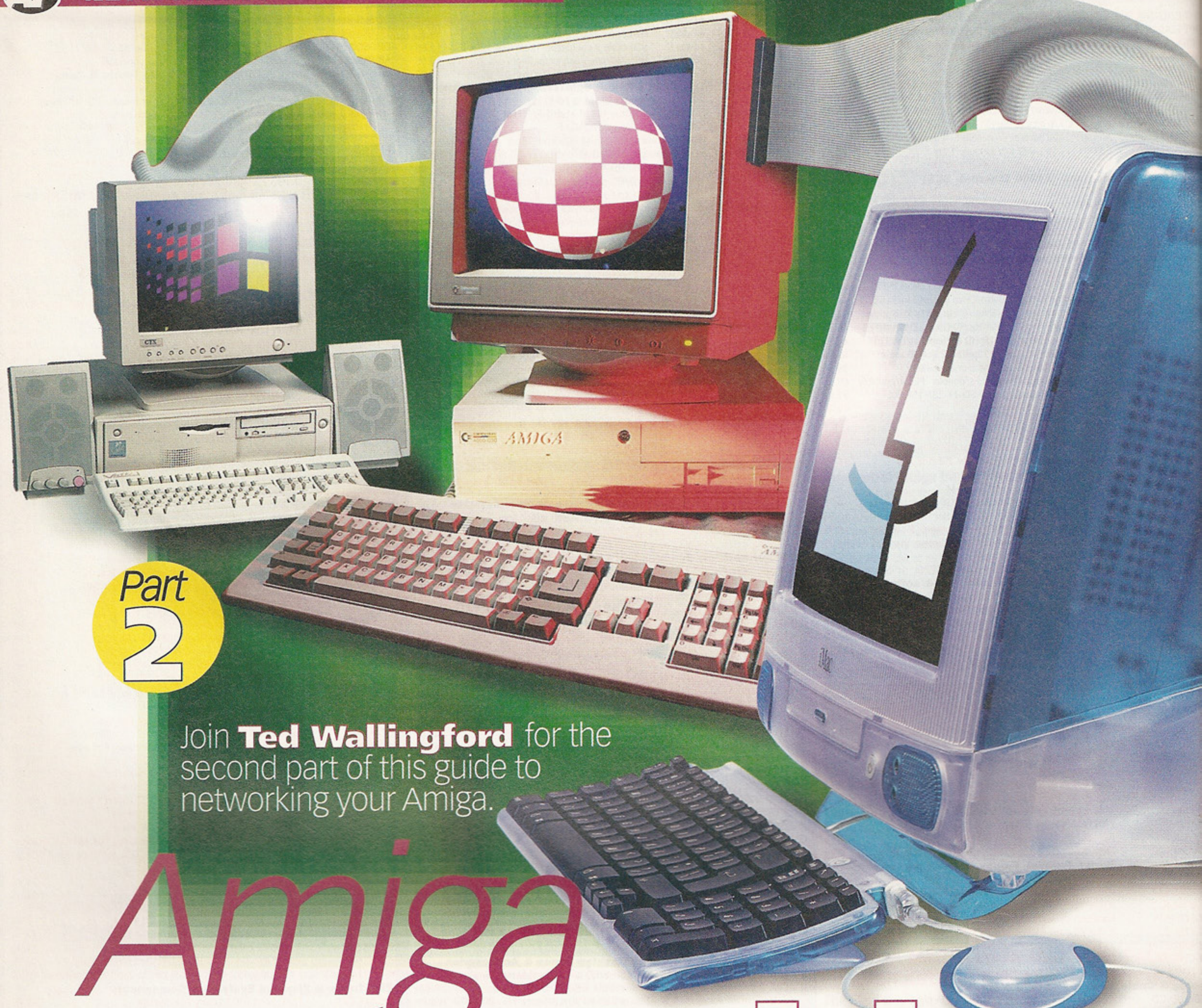
ADPT-KBD-SX32P	SX32 Pro PC k/b adapter cable 10cm	9.9
CD32-JOY	CD32/SX32 joypad	9.9
CD32-PAL	CD32 console with 18Wpsu/joypad/RF lead	149.9
SX32-MK2	SX32 Mk2 Ram/Clock/FPU expander for CD32	149.9
SX32-P40EC	SX32 Pro 030EC/40MHz Acc/Ram/Clk/FPU to 64MB	199.9
SX32-P50	SX32 Pro 030/50MHz Acc/Ram/Clk/FPU to 64MB	249.9

A1200 Magic Packs, Accessories and Upgrade Bundles

AMP-STR-FDD	A1200 Starter Magic pack FDD vers /w s/w	179.9
AMP-STR-HD2	A1200 Starter Magic pack w/170 HD, EZCD i/f, skt & s/w	248.9
AMP-MCD-PK3	Amiga M P 24xCD/2.5GB/'040-28/16MB/MT	598.9
AMP-PDV-PK3	A1200 Mgk pk 170MB/'030-40/8MB, EZCD i/f, skt & s/w	328.
AMP-PDV-EZT	A1200 Mgk pk 170MB/'030-40/8MB & EZTW+	448.9
AMP-PRO-PK3	A12 EZTwr Pro2 '040-40/32MB/4.3/PCkb/20xCD	798.9
AMU-STH2-CDUG	24 x CDROM upgrade for AMP-STR-HD2 w/PSU	59.9
AMU-MCD-4040/32	040/40/MMU/FPU/32MB u/g w/MCD-PK3	69.9
AMU-PDV-4025/16	040/25/MMU/FPU/16MB +100w ug w/PDV-PK3	99.9
AMU-PRO-HAB/64	160PPC,040/40/MMU/FPU/64MB ug w/PRO-PK3	129.9
AMU-PRO-MONSD	Int Scandoubler + 14" Digital Monitor ug w/PRO-PK3	129.9
AMU-PRO-LS120	LS120 120/1.44/0.72MB drive ug w/PRO-PK3	74.9

Tools, Test Equipment, Motherboards & Workshop Services

ACC-4/60-SSKT	Apollo 1240/60 2nd simm socket & fitting	20.0
PT-MBD-1200	Replacement A1200 m/b w/VID & RST fixes (no ROMs)	129.9
PT-EXT-PLCC	PLCC extractor tool for 33Mhz FPU	9.9
PT-ATM-9	9-range analogue test meter V, I, R, battery tests	9.9
PT-DTM-14	14-range digital test meter V, I, R, battery, diode tests	12.9
FIT-EZ-MAIN	A1200 to EZ-Tower fitting - A1200 + floppy drive	30.0
FIT-EZ-XTRA	Fitting/testing per customer-supplied periph into EZtwr	7.5
REP-AM-2B/1D4	A1200 m/b rev 2B or 1D4 manfact'g bus timing fault fix	30.0
REP-AM-PCMRST	A1200 motherboard CC_RESET manfacturing fault fix	30.0
REP-AM-VID	A1200 m/b VGA-modes video tearing manfact'g fault fix	30.0



Part 2

Join **Ted Wallingford** for the second part of this guide to networking your Amiga.

Amiga Networking

One of the quickest ways to move files between Amigas and other computers is by file transfer protocol (FTP), but it has certain limitations. For example, FTP doesn't allow remote file systems to be mounted for easy access locally. Furthermore, FTP doesn't let you print on remote printers.

Since FTP wasn't intended to be a distributed sharing system, it can't be expected to perform these tasks, but there is a fantastic file and print-sharing solution available for the Amiga and for other platforms.

Samba is a software system that provides Windows-compliant network services such as file and print sharing to non-Windows computer systems. *Samba* is compatible with *LanManager* protocols, giving it compatibility with DOS-based network clients too.

> "Samba is a software system that provides Windows-compliant network services to non-Windows systems."

With *Samba*, your Amiga can share its file and print resources with any Windows networking or *LanManager*-compatible computer system, including Windows, DOS, *Linux*, *NetBSD*, Macintosh and *Solaris*.

Samba uses the TCP/IP protocol so any machines that you wish to connect using *Samba* must have this protocol installed. See last issue's piece on networking for details about TCP/IP protocol suites for the Amiga.

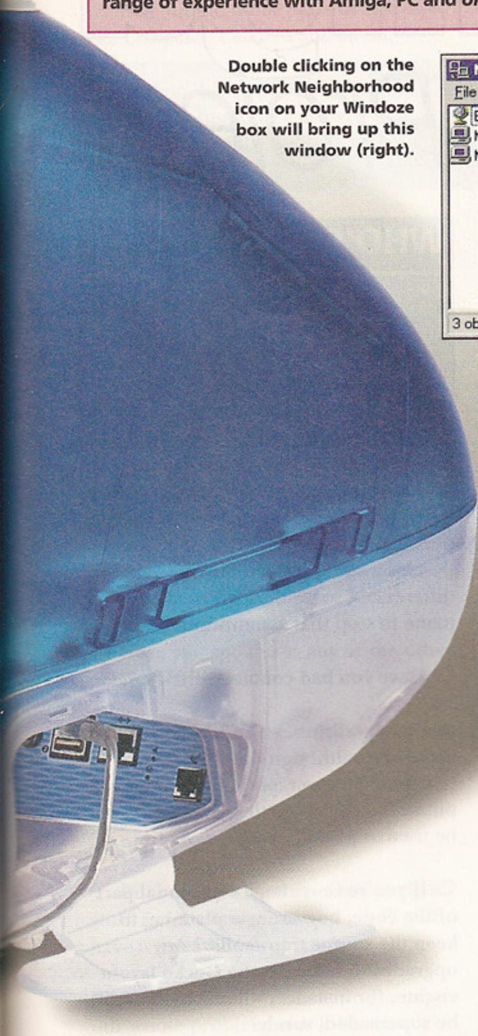
STEP 1

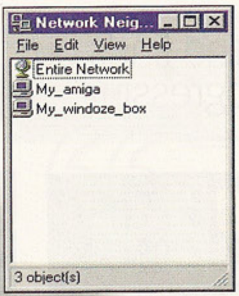
The Amiga *Samba* server: share your Amiga resources with other platforms on the network

Download the Amiga *Samba Daemon* from this site http://www.gbar.dtu.dk/~c948374/Amiga/Samba/download/ and unpack it into a directory. Note the contents of the archive, including smb.conf, the main

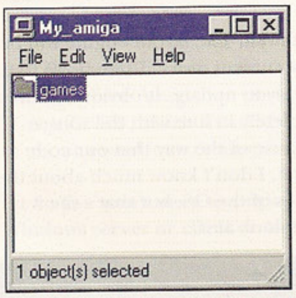
THE AUTHOR

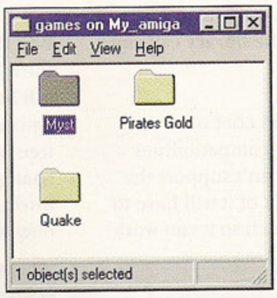
Ted Wallingford is the webmaster at Pantheon Systems, the company that produces the Amiga Inc. website. He has a wide range of experience with Amiga, PC and *Unix*-based systems.





Double clicking on the Network Neighborhood icon on your Windoze box will bring up this window (right).





Double clicking on 'my_amiga' will get whatever drawers are shared – here, it's my games: drive and its contents.

configuration file for the *Samba Daemon* (the server agent for the *Samba* system). The *Samba Daemon* expects to find this file upon startup. In order to reflect configuration changes, the *Samba Daemon* will need to be restarted.

STEP 2

Announce the Amiga's presence as a server on the network

By editing the smb.conf file with an entry like the following, you'll specify the *NetBIOS* name of the Amiga.

NetBIOS is a Windows-centric addressing protocol that allows computers to announce their names and their resource names on a network.

```
[Global]
        Netbios name=My_amiga
```

This setting gives your Amiga the *NetBIOS* network server name "\\My_amiga". Under Windows, network servers are preceded by two backslashes. The server's shared resources follow the network server name, like "\\My_amiga\My_Epson_Printer".

STEP 3

Share an Amiga volume or directory with Windows

The main *Samba* configuration file (smb.conf) allows you to establish file system shares so that other computers on the network can access your Amiga's file resources. Consider the following entry in the smb.conf file on the Amiga:

```
[games]
        path = work:games/
        writeable = false
        guest only = yes
```

This share appears on the network as "\\My_amiga\games" and allows read-only access to the games drawer of the work: volume on the Amiga. The "guest only" flag sets public access to the resource, meaning that a user name and password aren't required to read from the shared directory.

In the Windows Network Neighborhood, the share you've set up will appear as "games on My_amiga".

STEP 4

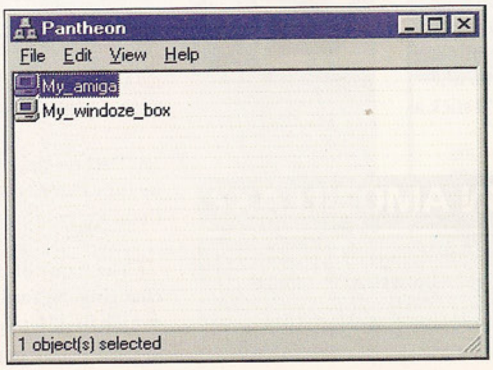
Start the *Samba Daemon* on the Amiga

Since you'll probably want file sharing services available at all times to the other computers on your network, you should add the *Samba Daemon* (smbd) command to your S:user-startup file. Edit your path command, usually found near the beginning of the s:startup-sequence file, so the system will recognise the directory in which *Samba* is installed as a part of the Amiga's command path.

Though you can start *Samba* at any time by issuing the smbd command from the CLI, it's best to have the daemon start automatically upon startup. To accomplish this, add the following to S:user-startup:

```
smbd -s <path  to configuration
file> >NIL:
```

From now on, booting your Amiga will launch the *Samba Daemon* and enable the services you've configured in the main configuration file.



A Windows NT domain can have loads of machines. Here it's just my Amiga and my PC.

STEP 5

Secure the Amiga's resources using workgroups or NT domains

When browsing the network, the Amiga's shares should appear as file folders under the Amiga Server in the tree of network hierarchy. Depending on how you configure your Amiga's *Samba Daemon*, the Amiga may appear as a part of a workgroup or as a part of a Windows NT domain.

A workgroup is a peer-based grouping of network resources, meaning that no single server controls security measures for resources that claim membership in the workgroup. Workgroups are usually used when there's no NT server present on the network, or if the network is small enough not to warrant more advanced security measures.

Resources shared by the Amiga using *Samba* can be limited to members of specific workgroups, but not to specific Windows NT users who have been authenticated and logged on to an NT server.

Windows NT domains are secure groupings of network resources whose security measures are managed by a Windows NT or *Samba* file server called the Primary Domain Controller (PDC). Every NT domain must have a PDC. In situations where a lot of users exist on the network and the most complete listing of these users exists on the PDC, the Amiga's *Samba Daemon* can be instructed only to allow access to certain users that have been authenticated and logged on to the PDC. *Samba* itself can act as the PDC if no Windows NT servers exist on the network.

For beginners, workgroups are much easier to handle since they don't truly enforce network security upon users. However, in real-world scenarios with many users on the network, NT domains are the only way to ensure adequate user authentication to the resources you've chosen the Amiga to share.

NETWORKING RESOURCES

Samba home page: http://www.gbar.dtu.dk/~c948374/Amiga/Samba/download/
Samba documentation: us1.samba.org/samba/docs/
Samba mailing list: rask-samba-request@kampsax.dtu.dk (with subscribe in the message).

An Interview with The Free Amiga Project

Ben Vost talks to the Free Amiga project and finds out how the port of *Netscape* to the Amiga is progressing.

On a sunny day in the middle of March we took two of the people involved with the *Netscape* porting project *AMozillaX* out to lunch to talk about their work.



Richard, Ben Rothwell, Ian Parker and I have a lovely cup of tea.

AF Tell us more about the *AMozillaX* project. Is it just something to get the other browser authors in gear? They certainly seem to have announced new versions since you announced *AMozillaX*. When are you likely to have a final version ready?

Ian Parker: It's not just a prod to improve other browsers. It'll be a few months until the first release and probably the end of the year for final release, but it's an ongoing project.

AF How are you doing for support?

Ben Rothwell: There's a lot of people who like it and who are supporting us. We had over 1,500 requests to be beta testers, but there are also people putting us down at every attempt.

AF Do we really need another browser?

Ben Rothwell: Why should Amiga owners have to pay for something that's free on other platforms? Basically, you have to buy all three Amiga browsers right now if you want to get the full range of functionality.

Why should Amiga owners have to pay that surcharge? I don't want to kill off the competition, but there'll come a time when the industry won't be big enough to support all three.

AF How much code is being taken from the original *Mozilla* project?

Ian Parker: Well, as much as possible, but there are bits that won't be compatible because of limitations in the Amiga's OS, like threads for example. We've had to rewrite parts of it so it'll even run on the Amiga, but we'll stick as close as we can.

AF The *Mozilla* source is *POSIX*-compliant, isn't it? Are you transferring all of the library calls into native Amiga calls?

Ian Parker: The main core of it, the NSPR, has a lot of incompatibilities because the Amiga can't support the *POSIX* things, so a lot of it will have to be written from scratch so it can work.

> "... there'll come a time when the industry won't be big enough to support all three Amiga browsers."

AF Will this mean that you'll be using completely new *MUI* custom classes?

Ian Parker: Yes, quite probably. They'll be fully external mccs and we'll release them for general use.

AF The name of the software keeps changing. So far it's gone from being *mozilla* to *AMozilla* to *AmozillaX*. What's going on?

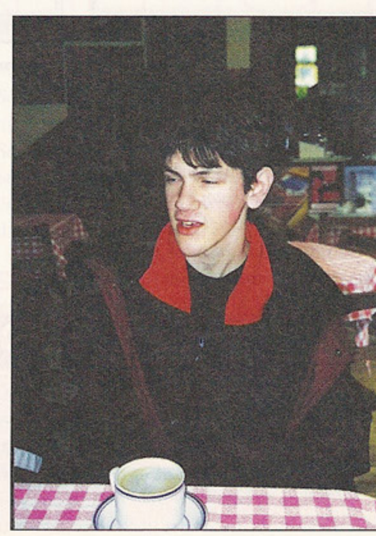
Ben Rothwell: When we were going to do a straight port it was *AMozilla*, but it quickly became clear that that wasn't possible, and it wouldn't be fair to say that it's a straight port. There will be differences, so we decided to change the name to stop that assumption.

AF Have you had contact with *Mozilla*?

Ben Rothwell: Yes, we've had contact with them, although they didn't really respond. However, part of the *Mozilla* public licence states that the code can be used as part of a larger work.

AF If you're rewriting a substantial part of the code, how are you planning to keep the source tree similar? Any upgrades to *Netscape*, the Gecko layout engine, for instance, will mean that it'll be superseded, surely?

Ben Rothwell: The layout engine will be the most current one, and we hope that it'll be easy to update. It obviously won't be completely in line with the source tree because of the way that our code changes it. I don't know much about the intricacies of the OS, but that's the way our team look at it.



WHO'S WHO?

Ben Rothwell – Project manager. Not directly involved with *AmozillaX*.
Stephen Grifiths – Head coder for *AmozillaX*.
Ian Parker – Coder: front end, image libraries, Javascript.

WHAT WILL BE IN AMOZILLAX?

Although these things are subject to change, this is what will be in the final *AMozillaX*: it'll be the browser only (which means no email client, etc.) with JavaScript, *Shockwave*, *Real Audio* and *Real Video*.

You said that the code could be used as part of a larger work, but really you're suggesting a smaller one, especially now the mail part of the program isn't going to be included. What about the other parts of *Netscape*, like *Composer*, *Collabra* and so on?

Ian Parker: A lot of stuff isn't actually included in the source anyway, including the mail client – they haven't been released.

Ben Rothwell: They're moving to a Java mail client anyway, and while we can run Java through Kaffe, it isn't going to be fast, so *YAM* will still be your best bet for email. We spoke to Marcel Beck to ask if he wanted that to be part of the project but he declined.

We've had Kaffe for quite a while, but what about the *Abstract Window Toolkit* and so on? Are they going to be ported too?

Ian Parker: Yes, they're about halfway through porting now.

Have you spoken to any of the other porting efforts?

Ben Rothwell: Yes, we've spoken to the people who are porting to BeOS and MacOS, but the OSes are so different there's little we can share. They have a far more *POSIX*-compliant system.

But could you use the *Geek Gadgets* stuff for the Amiga? I know you'll still have a threading problem…

Ian Parker: The threading problem is our whole problem with it because it relies so heavily on it.

Ben Rothwell: The other thing we're doing, as Free Amiga, is a port of *GTK* (*Gimp Toolkit*), which should be starting in about a week or so's time.

So you won't need to run an X-Windows server or client or anything?

Ben Rothwell: Nope.

So you'll be able to run programs like *GIMP* (a high-end graphics application, a bit like *Photoshop* for *Unix* platforms) immediately? It'll just be recompiled for 68K/PPC?

Ben Rothwell: Yep. Things like *GIMP* will just be straight recompiles. We're just forming a team to do that.

> "One day Voyager crashed on me. I was fed up with it and I wondered why I didn't have Netscape on my machine."



The name "*Mozilla*" is actually a contraction of *Mosaic* and *Godzilla*, Richard tells me.

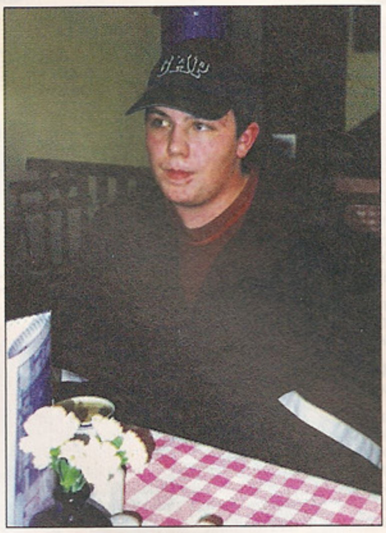
So apart from *AmozillaX*, are there other concurrent projects running at the same time, sharing resources and so on?

Ben Rothwell: Yeah, there'll be *GTK*, *GIMP*, eventually, and *Free Builder*, which is a Java visual toolkit. We're getting people to tell us what they'd like to see and then we'll get people working on it. A lot of people have asked us for *GTK* so we're doing it.

***GTK* has been a bit of a holy grail. What makes you think you'll be able to do it?**

Ben Rothwell: We've got a really good guy on board, Hans Jörg Frieden. He volunteered for Free Amiga and there's another team that's going to be working with him.

How did the project get started?



Ben Rothwell: Well, one day I was sitting at home and *Voyager* crashed on me. I was fed up with it and I wondered why I didn't have *Netscape* on my machine. Everyone was saying that the *Netscape* source was around and that an Amiga port would be here soon, only it never turned up.

Ian Parker: Yeah, everyone expected it to be like the *Doom* ports…

Ben Rothwell: It's not the sort of thing that one person can do. We saw that five or six people were porting *Descent* and we just thought that one team could do it quicker and better.

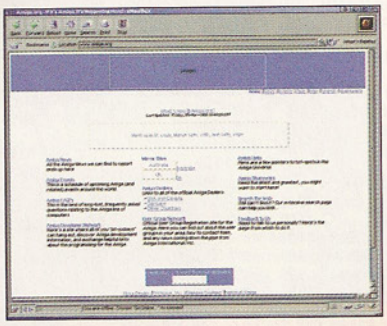
There has been a lot of duplication. Again, there are five or six different ports of *Doom*.

Ben Rothwell: With help from Amiga Inc. we could finish the *Netscape* port in time to put it in Amiga OS3.5.

Ben and Ian showed us the version of *AMozillaX* they had with them. It still didn't run very safely and, although they'd been up all night trying to code it, the version we saw still had the old layout engine in it, so all it really did was just download the pages on its own – there were no graphics.

However, we'll be keeping in close touch to see how it develops, so keep an eye on our news pages for more up to date information.





AMozillaX in action, kind of. No images and the HTML layout engine isn't their own…

SCREENPLAY

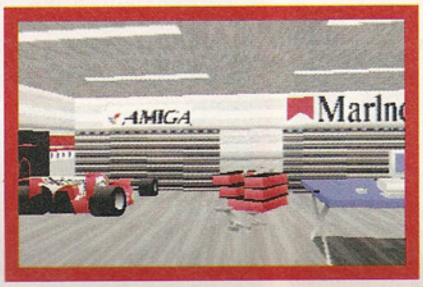
The latest games, hints and some clever programming from you!



There's little excitement on the games front this month, certainly nothing that can compare to having *Napalm* last month. Except possibly the news that an update is already scheduled for release, so check out previews for more details. While you're there, take a look at *Virtual Grand Prix*, a game which started off on an *AF* coverdisk as a bedroom coded effort but which impressed Epic so much they've given it the professional makeover.

It just goes to show that your homegrown efforts can often outperform commercial releases, so make sure you check out the Reader Games for some cracking efforts. You could even try writing one yourself and sending it in...

Mark Wheatley





F1 racing that started on an *AF* coverdisk (above left) and the long-awaited *Putty Squad* (above right).

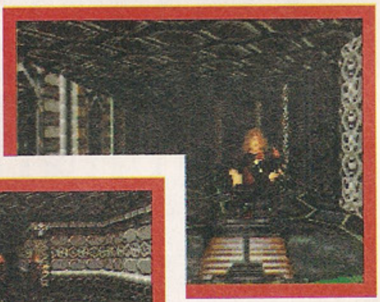






Bograts (above) is just one of the 10 games included.

Classic retro adventure can be found among Vulcan's collection.







Lots of undead beasties who are just waiting to be killed. Erm, again.



Have you been here before? We show you how to get there and why it's a good place to find.

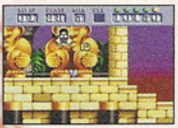
AMIGA FORMAT'S REVIEW POLICY

WHAT OUR REVIEW SCORES MEAN

Every month we scour the world's software houses for the latest and greatest Amiga games. We try to ensure we keep you as up to date as possible and we'll stop at nothing to bring you the best, definitive, no-nonsense reviews of the games that matter.

90+%	The crème de la crème. Only the very best, most playable and original games are awarded an AF Gold – the most highly prized rating there is.
80-89%	These games are very good, but due to minor flaws they're not the finest examples of their genre.
70-79%	Good games which are worth buying, especially if you have a special interest in a game type.
60-69%	Average releases with somewhat limited gameplay and appeal. Games in this category tend to be flawed.
50-59%	Below average games which are unlikely to impress your mates or your wallet..
40-49%	Overwhelmingly poor quality games with major flaws and appalling gameplay.
Under 40%	The absolute pits.

Previews





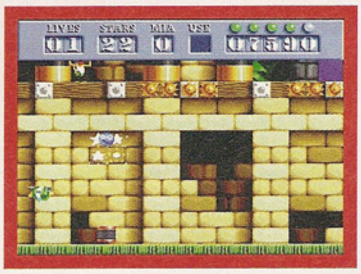

Ben Vost gives you the lowdown on some of the games coming your way very soon.

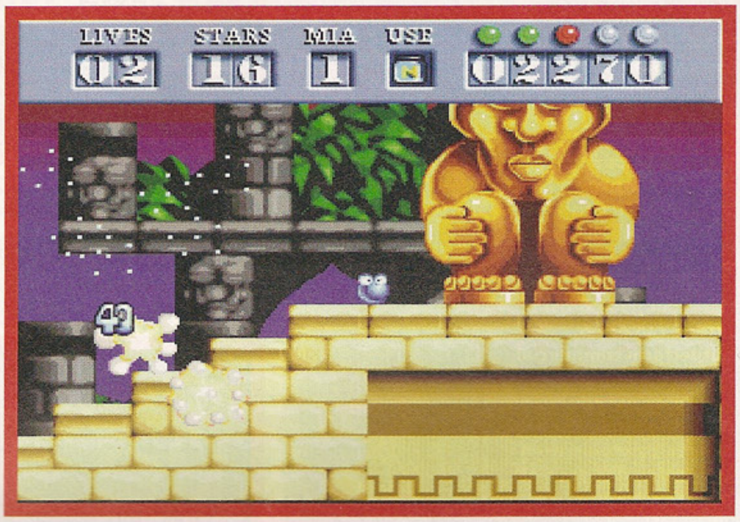
Putty Squad

ON THIS MONTH'S CD

AFCD39:-ScreenPlay-/-Commercial-/PuttySquad







The demo on this issue's CD gives you something to get your teeth into.

Putty Squad was to be System 3's last game for the Amiga, but although it was pretty much finished and had already received a rapturous welcome from Amiga games mags, it was never actually released. Fortunately, Alive mediasoft picked up the baton and are now ready to release the game. It's an old-skool platformer with great graphics and nice little touches. Because of its age, it's not going to be suitable for anyone who wants a game on a graphics card, or one that'll use your expensive PowerPC, or even your hard drive. That notwithstanding, it's still great fun to play and the demo on this issue's CD will have you yearning for more, and looking back nostalgically to the times when not everything had to be in 3D to sell. For more details, contact Alive mediasoft on 01623 467579.

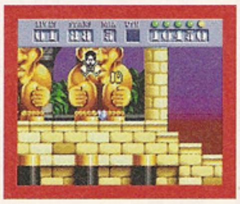


Your piece of putty has a large range of weapons at his disposal to get rid of bad guys.







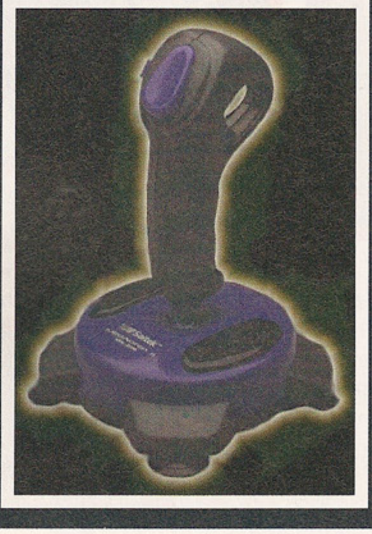


Putty's range of moves and equipment are also pretty varied.

Joystick News...

Alive have recently got a huge load of joysticks in from Saitek. As you can see from the photo, they're quite good-looking and have all the usual features, like a turboswitch and suction cups to stick it to your mate's forehead.

It's called the Saitek MegaGrip II and you can get it from Alive mediasoft (01623 467579) for just £9.99.



It's big and blue and black. What more do you need to know?

Virtual Grand Prix



ON THIS MONTH'S CD

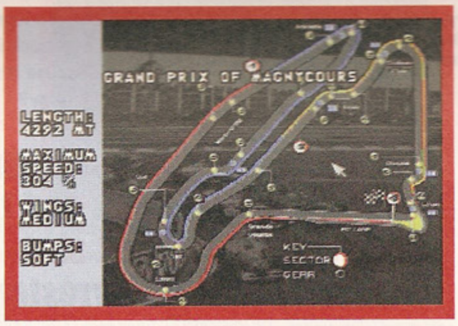
AFCD39:-ScreenPlay-/-Commercial-/VirtualGrandPrix

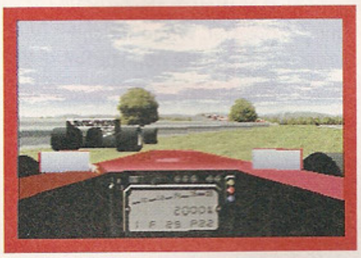




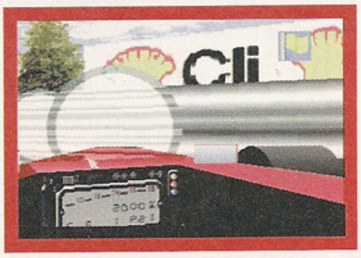
Long time readers of *Amiga Format* may recognise this little game from our CD. It used to be called *AFormula1* and it was the obvious prize winner for our *AFCD14*. Epic Marketing also spotted it and contacted the author, Paolo Cattani, with regard to him turning it into a proper commercial game. After 25 CDs of waiting, the game is very near completion and it looks pretty good.

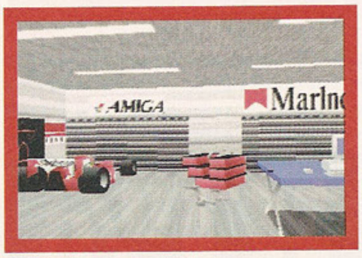
Still using full 3D for your car and your competitors, it also uses accurate tracks to give you a taste of the world's best circuits. Although the game doesn't have any official sponsorship, the advertising on cars and hoardings is still present thanks to some tricky copyright avoidance by cleverly altering the names of various companies. The new demo is on this CD and you'll be able to get *Virtual Grand Prix*, as it's now known, from Epic soon. For more details, contact Epic on 0500 131486.











As you can see, Virtual Grand Prix should be worth waiting for.

Napalm update

Keeping up with their decision to keep supporting *Napalm*, clickBOOM are releasing a patch for the game, only a month after the game itself came out.

The patch provides slightly better stability and a rather nifty zooming frame when you select a unit. This patch is only available to people who've registered the game, so make sure you send that registration card in. You can buy *Napalm* from most Amiga software dealers.





Napalm 1.2 improves an already great game still further.



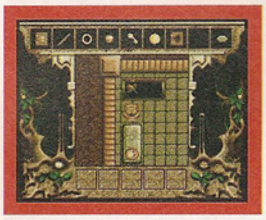


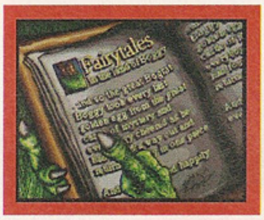
Vulcanology

The study of the planet Vulcan? No, it's a collection of ten games, as Richard Drummond finds out.



Watch loads of little blokes kill each other in a garden – that's Tiny Troops.





Top: Valhalla. Above: The intro to Bograts was as far as I could get.

Vulcan have been one of the major publishers of Amiga games in the post-Commodore era. Strangely, I somehow missed every single one of these games when originally released. I had no idea what I was in for...

The Valhalla Trilogy

Valhalla was the game that made Vulcan's name and is billed as the first speech adventure. The gameplay is derived from that '80s genre, the arcade adventure. In this game you get an overhead view of your character, who you control through a scrolling map with a joystick. Problems are solved by manipulating objects you find via an icon-driven interface and any feedback is given in sampled speech, because it's a speech adventure, okay?

> **Burnout is something like Robot Wars and the only saving grace of that show is the lovely Phillipa Forrester...**

The graphics and speech are good. My main problem with the game is the laggardly pace. Your character waddles about leisurely and even changing direction takes an age. The game is slowed down even further by the speech, which becomes irritating once the novelty has worn off. The portion of the game map viewable on screen is tiny, making it difficult to see where you're going.

Despite these faults, the game is quite engaging once you get used to it. The problems aren't always logical, but the game really instills a genuine desire to progress.

The two sequels were Vulcan's attempt to reprise the winning formula to varying degrees of success. *Valhalla II* and *III* have only minor modifications from the original and so have similar merits and faults.

Timekeepers

Hands up all those who remember *Lemmings*. Well, *Timekeepers* is a clone and it's undoubtedly my favourite game on this disc.

The idea is to guide your army of *Timekeepers* through sixty levels, split into four worlds, in order to defuse 20 nuclear devices planted by some nefarious baddy. You must negotiate your troops through each labyrinthine level, avoiding obstacles, crossing bridges and, of course, killing whatever inhospitable residents you come across.

The major difference from *Lemmings* is that you get an overhead view of the play area. And, instead of clicking on your players to issue commands, you select command icons and place them in the paths of your troops. You may think this is an odd idea but in practice it works well.

You can lay out a whole string of commands while your army is milling about in a safe place, then drop an initial command and watch them all scurry off.

The graphics are sufficient but rather minuscule. You get the same restricted view of the scrolling play area as *Valhalla*. The game is quite tricky to play, sometimes frustratingly so, but it's still quite surprisingly addictive.

Timekeepers II was initially released as an add-on data disk for the original. It's basically a collection of extra levels with exactly the same gameplay and graphics.

The rest

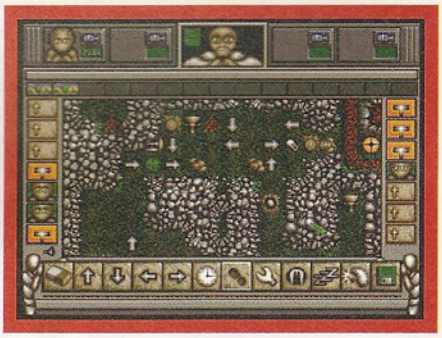
The remainder of the games on the CD are of variable quality. *Tiny Troops* will be familiar to fans of the *Command and Conquer* style of game. The graphics are cute and colourful but the game is just too slow, the method of control too hit-and-miss and the level of difficulty too low. It's not bad, but basically it's just not interesting enough.

My first real disappointment in the collection was *Bograts*, a platform game which I was unable to play. Even when installed onto floppies it kept asking me to insert disk two. Doing so achieved nothing.

Next up, *Jetpilot* is supposedly an exceptionally realistic flight simulation. Too realistic, perhaps, as they've sacrificed gameplay to accuracy and it's terribly tedious. The selection of planes you can choose to fly is odd too, with the English Electric Lightning, the Lockheed Starfighter, etc. None of these has seen active service for years. The final nail in the coffin, though, is the featureless graphics which limp along, even on an '060 machine.

Penultimately, we have *Hillsea Lido*, which is touted as a *Seaside Management Simulator*. What a bizarre concept for a game. Need I say any more?

Last and definitely least is *Burnout*. While the game has fantastic rendered graphics (albeit displayed in eye-straining interlace), the game is just pointless. The idea is to control a car and bash all the other cars out of the arena. It's something like *Robot Wars* and the only saving grace of that show is the lovely Phillipa Forrester. Without her, *Burnout* is a definite non-starter.



Timekeepers is quite like Lemmings but not half as cute.

The Whole

Vulcan claim that each of these ten games is an award winner. This may be so, but they haven't stood the test of time well. Not only is the gameplay dated, but so is the target Amiga that the games are designed for. Eight of the 10 will run on any Amiga and as such they take no account of modern hardware. None of them will multitask or permit screenmode promotion.

Nevertheless, *Vulcanology* does offer a wide selection of different games styles at a cheap price. This is a chance too good to miss for the average game-starved Amigan.

DEVELOPED BY: Vulcan Software
SUPPLIED BY: Weird Science (01162) 463800
PRICE: £12.99
RELEASE DATE: Out now

Pros and Cons

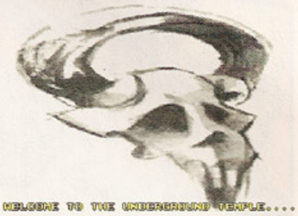
- \+ Great value for money.
- \+ Good variety.
- − Dated gameplay.
- − Poor support for modern hardware.

OVERALL VERDICT: Cheap and cheerful.

81%

Zombie Massacre

Prepare to see dead men walking in Alpha Software's latest release. Richard Drummond braves the challenge.

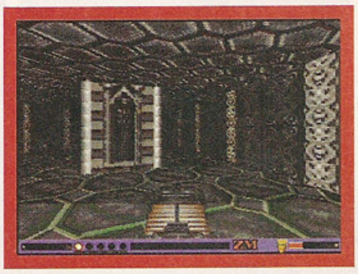


What do you get if you cross George Romero's horror B-movies with the game *Wolfenstein*? Answer: *Gloom*. And, in the true tradition of the video nasty, they just didn't know when to stop. *Gloom*, *Ultimate Gloom* and now *Zombie Massacre*. Yes, it's yet another zombie-infested, fake 3D shoot-em-up.

The gameplay and controls of *Zombie Massacre* are all too familiar. The idea is to play through each of the 30 levels, obliterating the armies of undead. To progress to the next level you just have to find the exit. Self defence comes in the form of a plasma cannon for which you may collect power-ups and luckily someone has left these carelessly strewn about each level. You may also pick up health power-ups to repair any damage.







Collect the weapon power ups to wreak extra damage on those animated corpses.

Two player games are possible via a null-modem cable or a modem, in either co-operative or combat modes. The former mode allows teamwork: it shows both players' views on the same screen, players share lives and cannot hit each other. The latter mode is a head-to-head game like *Quake*'s deathmatch.

Graphically the game is adequate, if a bit repetitive. Some of the patterns used for walls, doors, etc, are nicely drawn but there's too much repetition, making it difficult to distinguish one corridor from another. The zombies themselves are amusing, but poorly animated. I imagine zombies are supposed to shuffle, but a bit more life wouldn't go amiss. They do explode rather extravagantly when you blast them, though. There's even an option to turn the blood effects to 'dirty', where the ground becomes littered with dismembered body parts for you to trample on.

The sound effects also merit a chuckle or two. While playing *Zombie Massacre* in the office, everyone mistook the gurgles and groans of the zombies for a bout of terminal indigestion.

My main gripe with the gameplay is that the levels are just too empty; there's too little to do. Couple this with the unvaried graphics and the end result is *Gloom* indeed. The degree of interaction with the game world is too low.

In fact, the lack of feedback can be bewildering: doors open for no apparent reason, or upon walking into an empty corridor you suddenly get teleported somewhere else. Another problem lies in distinguishing what the exit of any particular level actually is.

The engine

The hardware requirements for *Zombie Massacre* are modest. The absolute minimum spec is an '020, AGA and 3Mb of memory, although, as usual, the more power the better.

The game engine has been upgraded from *Gloom* and is now allegedly about 20% faster. But curiously, given the simplicity of the game engine, on an '060 the game feels less responsive than, say, *Doom*.

Upon starting *Zombie Massacre*, by default the multitasking is switched off and the game runs in its own custom screen. However, the game setup utility offers an option to leave WB open and you can run in the screen of your choice; in practice this doesn't work too well.

For me, it would crash in any screenmode other than NTSC, and NTSC just isn't high enough because the screen display is chopped off and you loose the status panel.





Remember – the only good zombie is a dead one!

> "While playing Zombie Massacre, everyone mistook the gurgles and groans of the zombies for a bout of terminal indigestion."

The verdict

The question that strikes me with regard to *Zombie Massacre* is why another *Gloom* release? It doesn't offer much more than the previous games in the series. Moreover, the game engine hasn't aged well.

Amiga gaming has evolved considerably in the last year and a half. We've had *Doom*, *Quake*, *Descent* and now *Hexen* and *Heretic*. Technically, these are all much better games, and they're all much more engaging to play.

Setting the scene

The *Zombie Massacre* CD features a 65Mb FMV animation of the "actors" stumbling about in zombie poses and mouthing zombie grimaces. The plot, as superfluous as they come, is voiced over by a what sounds like a Geordie on valium. The story is some nonsense about biotechnology, genetic engineering and a supervirus which turns any ordinary Joe Public into a ravenous revenant with a lust for human flesh. Guess who has to clean up the mess?

All of this fails to build any atmosphere, however, and just adds to the amateurish, home movie feel of the package. Perhaps this is a deliberate allusion to the many films which obviously inspired the game...

DEVELOPED BY: Alpha Software
SUPPLIED BY: Epic Marketing 0500 131486
PRICE: £19.99
RELEASE DATE: Out now

Pros and Cons

+ Doesn't require a high spec machine.
+ Doesn't take itself seriously.
- Gameplay fails to sustain interest.
- General unpolished feel.

OVERALL VERDICT:
There are better 3D shoot-em-ups available.

65%

It's spring, the time when Amiga programmers blossom into life. Mark Wheatley plucks some of the freshest...

Reader Games



AFCD39:-ReaderStuff-/-ReaderGames-

Yes, the daffodils are out, the sun is shining and… that's a complete lie. As I write this, it's cold, wet and windy. The perfect sort of day, in fact, to spend huddled round a warm computer, carefully programming the next classic game.

You should know what we expect by now. We want games that are addictive, original and, well, that's about it. Of course, it helps if we can get them to work (as mentioned later on). Stunning graphics and sound are things you can add later – we just want a game that'll give us joystick strain, so come up with a concept (a multi-level, duck-based platforming quest, an arcade 'poke a badger with a spoon' game or whatever), then get coding and send it in. We'll give you the benefit of our advice and possibly a fifty quid note for your efforts, which never goes amiss. A few tweaks later and voilà – worldwide fame and fortune await and you'll have all the gold you can eat. Perhaps.

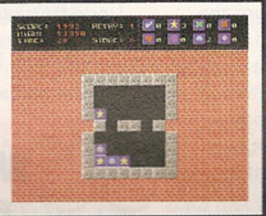
At the very least you'll have the satisfaction of having your game featured in the world's best Amiga mag and played by thousands of people. And who knows – maybe if it's good enough, the fame and fortune might actually be waiting just around the corner…

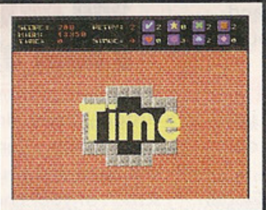
Game of the Month £50 Winner!

Jazznic



Nice graphics on the brief intro screens, pretty basic graphics in the game itself.

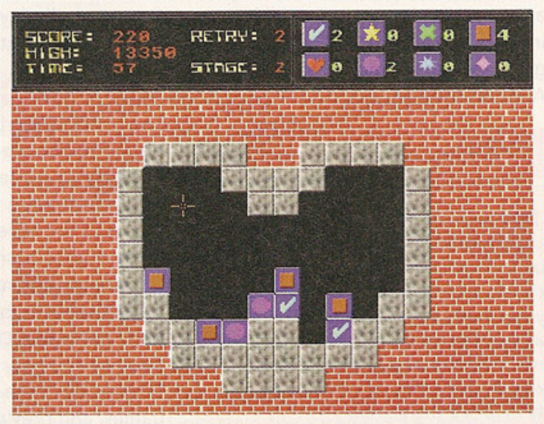


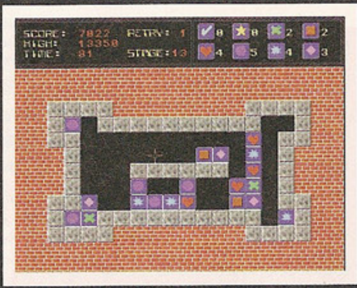


Oh how we mocked this one. Far too easy, we said. A five year old could do it with his eyes shut, we said. All you have to do is move blocks next to blocks with the same pattern and they disappear. You can drop them off the end of ledges, but can't raise them up. Get rid of them all and you've finished that level.

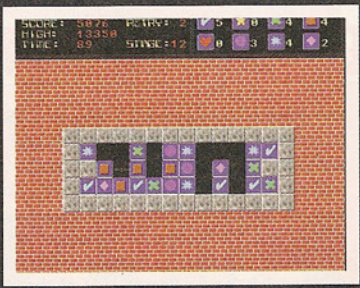
And so the mocking continued for the first few levels, and then – schoolboy error! We left a spare block. The way to do it correctly was then perfectly obvious so we romped through it and then on the next level we left another spare block. And all of a sudden the mocking stopped and some serious puzzling began in earnest.

The genius of this game is that the levels seem to be so simple that when you make a mistake you kick yourself for not seeing the obvious way to complete that level, and you then just





Make sure you work out how to proceed before joining blocks together.



It looks simple, but you have to do it in the right order.

READER WARRANT

When you're sending in your submissions make sure you also give us:
1. An address where you can be contacted.
2. Details of the language used to create the game.
3. A recent photo of yourself.

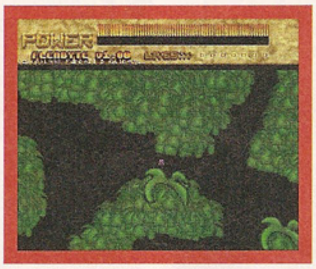
The address to send your stuff into is:
Reader Games • Amiga Format • 30 Monmouth Street • Bath • BA1 2BW

Everything included on the *AFCD* must have a reader warrant with it. Just cut it out off this page, sign it and send it in to us with your game and a recent photograph of yourself. A last reminder: if you don't include this warrant we simply won't be able to put your game on the CD – that means you won't be able to have it judged by other readers.

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2. The material does not contain any material which is defamatory, obscene or indecent and is exempt from classification under the Video Recordings Act 1984;
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Flea Byte





Watch the spikes – you may be a tough little blighter but just one touch will kill you.

You play the role of a flea and you've got to reach the top of each scrolling level. As far as game concepts go, it's one of the simplest ones you're going to get.

The backgrounds are all pretty nice, in a *Worms* sort of way. Your character may be extremely small, but it's excellently animated with a lot of detail – the way your little legs move when you jump will have you saying 'Aww, isn't that cute' to a flea for the first time in your life. Unless you have a particular fondness for the itchy little bitey parasites, of course.

Speaking of jumping, you have to hold down the fire button of your joystick to leap around – the longer it's held down the higher and faster you jump. This can get a bit uncontrollable and you'll find yourself ricocheting off the outcrops of rock above you if you're not careful. This won't kill you, but if you happen to then land on one of the nasty spikes littered around the levels then that's gonna hurt you bad...

Controlling your jumps is all important, but it's quite tricky to change direction while in the air as you only seem to be able to move from side to side as you're falling back down, making it hard to hit that little nook in the cavern wall you were aiming for. The controls will definitely be too fiddly and precise for some, but most gamers should persevere with this one as they'll find the game becomes a lot more enjoyable as you get used to the quirky controls.

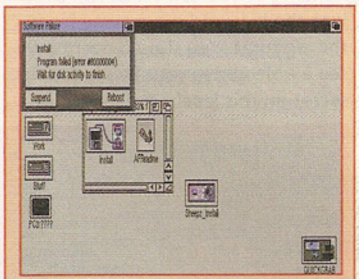
Not surprisingly in a game about a flea, there's a bit of a bug. When you're jumping up the walls you can occasionally get stuck in the rock. Repeatedly jumping, while trying to move up or to either side, should eventually free you, but this can be a bit annoying. However, this game is still a lot of fun to play and it moves smoothly, looks simple and tidy and is definitely a challenge – it took us an embarrassingly long time just to complete level 2....



This is basically a copy of *Bugaboo the Flea*, but it's well worth trying and you're bound to get sucked in. It also only took two days to program, so think what it could be like if more time had been spent on it.

AUTHOR: Mark Farrell
LANGUAGE: Blitz 2.1
VERDICT: Like a flea bite – a bit irritating but you'll keep scratching away at it...

It doesn't work!



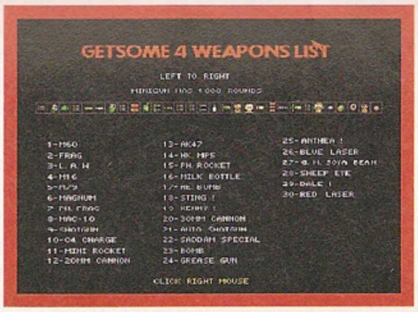
This picture is one we see a lot at *AF* Towers, and it's the sight of a reader game stubbornly refusing to work on our Amigas. If you've spent time and effort creating your masterpiece, please spend just a tad more testing it on a friend's machine – it may work fine on your setup, but that doesn't mean to say everyone's Amiga will like it...

have to have another game, just to prove to yourself how easy it all is. As such, it never gets frustrating, no matter how fiendishly the blocks are arranged, and you put mistakes down to you trying to rush through the levels too quickly.

Jazznic has basic graphics and quite blocky movement but it's an addictive puzzler and well worth this month's £50 prize.

AUTHOR: Costas Pagomenakis
LANGUAGE: AMOS
VERDICT: A top notch puzzler with a learning curve that will really draw you in and keep you coming back for more.

Getsome 4



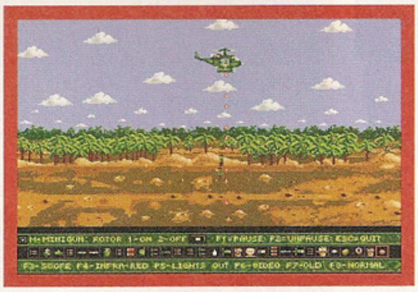
There's now a really impressive list of weapons you can use.

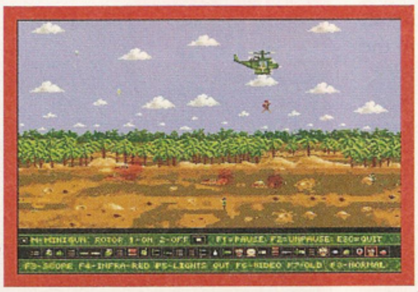
Okay, this has been in the last few issues, so here's a very brief outline of the game for those who've been on Mars and have missed it – helicopter, guns, little soldiers, bombs, jungle, blood, Kenny from South Park, shooting, death, rescuing, explosions, more blood, Sting, no sense of a challenge, missiles, a bit more blood.

Hold on, back up a bit. No sense of a challenge, that's the one. It played well and was fun, but not enough to make you come back to it again and again, and as such I promised myself not to include *Getsome 4* this month if it just had the usual superficial updates like extra weapons (it has – you can now drop an unsuspecting Anthea Turner onto the enemy and when you drop Dale Winton you now get an amusing Supermarket Sweep effect of a till ringing. There's also more blood, optional chopper rotor sound and other bits 'n' bobs).

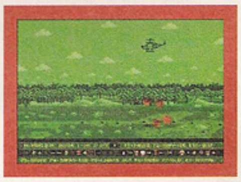
The major addition is that the enemy now shoot back at you. Instead of just sitting blasting away with impunity, you've now got a hail of incoming fire to avoid. Ten hits and you're dead. You also get a score sheet at the end, like the one in last month's *Recon Team*, showing you the number of kills, rescues, etc, giving you a way to see if you're improving and a way of challenging yourself.

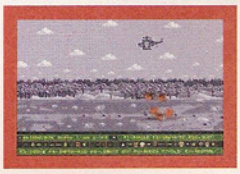
It's taken a lot of effort but the results are worth it. Boot up *Getsome 1* and then boot this up and see how perseverance can really improve a game. AF





You still get a satisfying about of carnage, but now you've got to be careful too.





The different views and options have been expanded once again.

AUTHOR: A. Cole
LANGUAGE: Blitz 2.1
VERDICT: A fully fledged humorous shoot-em-up that looks good, is fun to play and now has a challenge that'll keep you playing.

Gamebusters

THE COMPLETE Quake SOLUTION PART 4

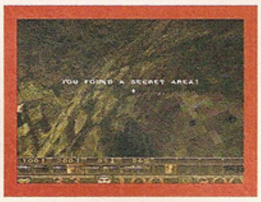
At the current rate it'll take a year and a half to give you the solution to Quake, so Ben Vost decides to speed things up somewhat.

Rather than run you through each level in its entirety, I've decided to concentrate on letting you know where the secrets (and secret levels) are. I'm not going to cover the secrets for the first three levels since I've already described them. As there are quite a few secrets to get through, plus the secret levels to describe, we've decided to put up the Gamebusters section from two pages to four, so we can finish the whole of *Quake* in two issues.

Then we can concentrate on showing you how to get through *Sixth Sense Investigations*…

Episode 1: Dimension of the Doomed

4. The Grisly Grotto

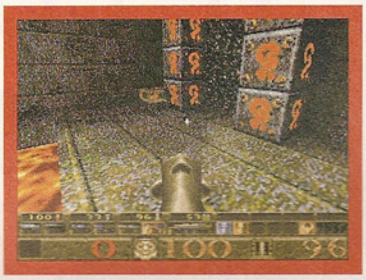


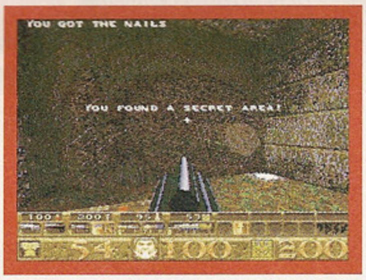
Secret 1: This one's fairly obvious – it's the two dagger tiles at the very start of the level.

Secret 2: When you get to the edge of the lake and you've got the biosuit and dropped into the water, there's a very small room about half way up the wall to your right.



Follow our expert guide to find all the secret areas in Quake, and learn why they're worth seeking out. To get extra weapons, armour and health, generally…

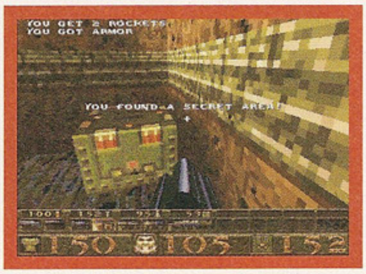




Health and good nails – what more could you want?

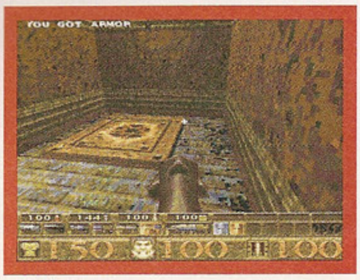
Secret 3: Return to the opening onto the lake where you got the biosuit and swim directly across. You'll get to a room with a slipgate. This leads to secret level one.

Secret Level: Ziggurat Vertigo



…and just to prove it, extra rockets and armour!

Secret 1: Get the Pentagram of Protection from in front of the ziggurat (it's the big pyramiddy building so you can't miss it!). Drop into the lava and swim away from the ziggurat. You should eventually see a hole above you. This is the first secret on this level.



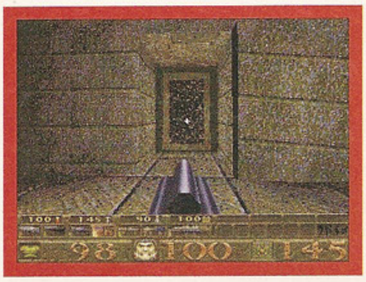


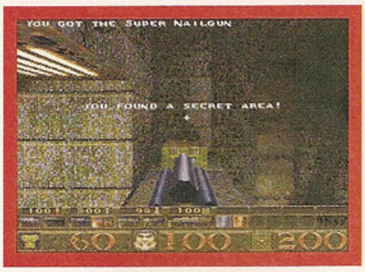
Head down the stairs to see what awaits…

Secret 2: At the exit, turn to your left and, following the wall, walk past two lights in the floor. When you come to the third one, turn right and you should see an odd section of wall. Shoot it.

5. Gloom Keep

Secret 1: Jump off the right-hand side of the first bridge and go to the entrance which you should be able to see under the water.







The super nailgun sounds particularly impressive, and it's well worth seeking out.

Secret 2: The little tower with the ogre in it at the foot of the stairs (where you get the yellow armour) is your next secret area.

Secret 3: Where you get the perforator, stand under the torch and jump up. Look behind the column for a new room.



Secret 4: Just after this bit, you should be climbing some stairs and at the top of these there'll be a slipgate. Go through it from the back and you'll get to the last secret area for this level.





Jumping out of the water reveals yet another secret area.

6. The Door to Chthon

Secret 1: There's a *Quake* tile on the wall of the first room you're in, near the rocket launcher. If you shoot it and run to the right you'll get into a secret elevator shaft.

Secret 2: You know the spiked wall bit? Wait until it goes past you, then run behind it and you should be able to see a slipgate.

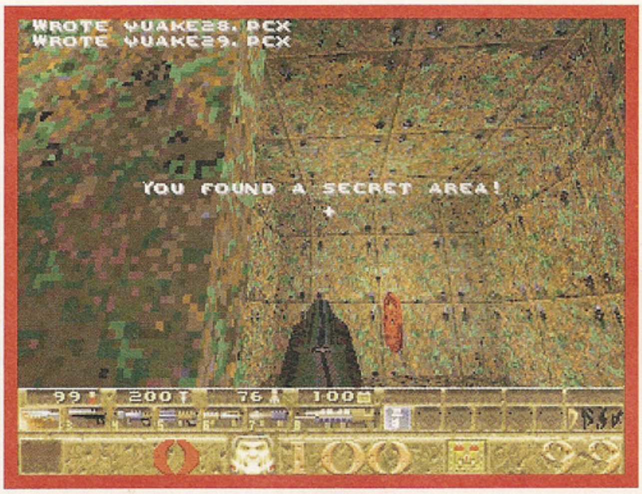


Extra health never goes amiss, and you've found a rather nice pattern of mould on the wall too.

Secret 3: At the point where you create the bridge to cross the lava you'll notice a new item on the middle column of the room. If you shoot it, the steps up to the doorway on your left will drop down. Go in there for the third secret area and wait.



You got the rune, but watch out for Tony the Tiger – he's had his Frosties…

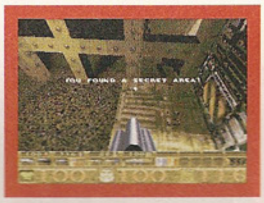


A Pentagram of Protection is always worth looking out for.

Secret 4: When the steps go back up they reveal another slipgate where you can get a megahealth.



A rather nobbly secret area. Which is nice.





Make use of the lifts to seek out those hidden areas.

7. The House of Chthon

No secrets here, but if you haven't worked out what to do, keep running and get onto the top level. There are three *Quake* tiles here and you need to step on the paired ones to drop two bars down on either side of Chthon. Then get to the third one and step on it to give him the shock of his life – involuntary ECT.

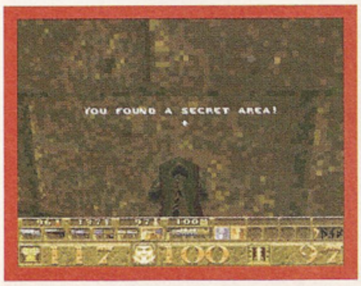
A couple more of those should give him the full McMurphy treatment, although you won't have to hold a pillow over his face.

Episode 2:

Realm of Black Magic

1. The Installation

Secret 1: Ignore the green armour and go for the red. There's an angled bit of wall on the left-hand side of



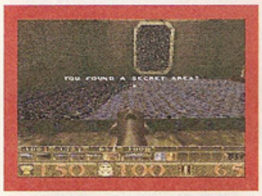
Another secret area. A brown one.

Continued overleaf ➡



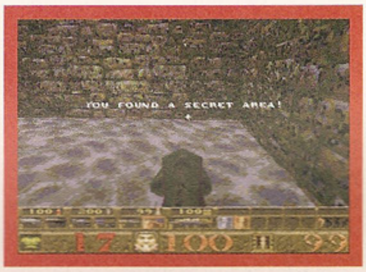
Is that an extra bit of high-powered weaponry I see before me?

⇐ the big room with the diagonal bridge across the water, near the start of the level. Swim over to the left and you'll see an opening in the wall. Look



You've just discovered medkits and slimy walls that no-one's ever set eyes on before!







Secret areas galore. Is there anywhere in this game that isn't secret or hidden?!





A cunningly hidden health bonus. Not that it's needed 'cos our little chap is in perfect health.

right and you'll see another. This is where you'll be able to get the red armour from.

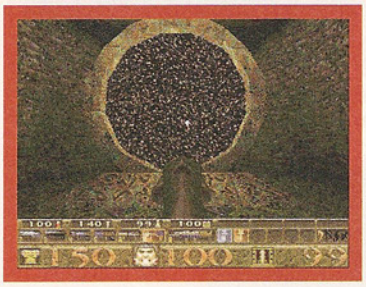
Secret 2: There's another tunnel under the water here where you can get a variety of stuff.

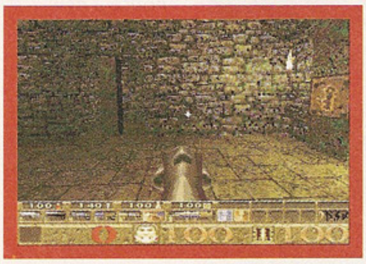
Secret 3: In the room with the gold keycard there's a flashing light on your right, up a sloping bit of wall. If you persevere you can jump up and through the fake wall here and get some stuff. You can walk back through the wall when you've got everything you need.

Secret 4: In the same key room there's some sludgy water under where the guy was shooting at you. Drop into that, turn right, follow the path and you should come to a raised area which is another secret area.

Secret 5: There's a room with a big round pool in the middle. Drop into it and shoot the grate you see at the bottom. Drop through the grate and shoot the next grate you see three times. You may be running out of air by now, but there's also a biosuit underwater here so get that and keep going. By exploring further you'll also find some ammo, a slipgate and a pentagram of protection.

Secret 6: The bit with the cage. Jump





Aha! A locked door. Bet there's something useful stashed away behind that...





The secret areas often contain armour, and the biosuit is an added bonus here.

over the first lift into the bit behind it to get the ammo. Shoot the wall to get the quad damage.

Secret 7: Use both lifts to get up to the bit where you're going down some stairs with the cage to your right. You'll see a bit that's open so step through and drop down to get the yellow armour.

2. Ogre Citadel

Secret 1: Kill the bad guys in the citadel by shooting one of the dagger tiles, then shoot the other. Make sure you kill whatever's in the moat and then drop down into it and head for the left-hand side. There'll probably be a zombie there so take him out and use the lift to get the megahealth.

Secret 2: Go out and follow the water (you'll see yellow armour on the bridge). You'll come to a dark passageway and there'll probably be some nasties waiting for you, but one of the exits goes up some stairs and opens a secret door into some ogres.

Secret 3: Once you've killed the ogres around you, you'll see a window through which there'll be another ogre shooting at you. Kill him and leap from your window into his via the bridge with the yellow armour on it.

3. Crypt of Decay

Secret 1: Go to the bridge (if you turn back now and go back down in the elevator, a new door will open and you can get more nails). Get the green armour. Turn to your left and drop into the water. Swim back on yourself, turn right and you should be able to see a door.

Go through that, kill some rotfish and carry on until you see a passage on your right. This'll take you to a slipgate and some red armour.



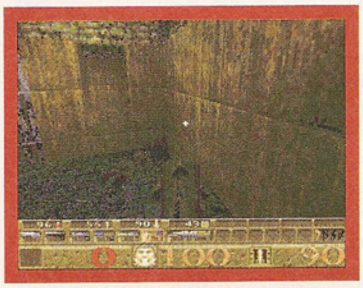
Health and bombs and lock 'n' load.

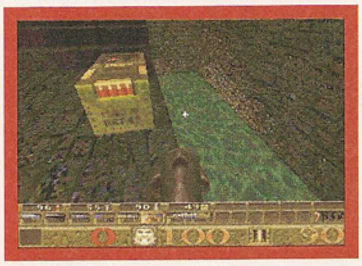
Secret 2: Once you've killed the fiend and the ogres, you should be able to cross a bridge. On your left you'll see some zombies putting themselves about. Shooting them opens a passage from near the gold key door to their platform. You can get some rockets from here.

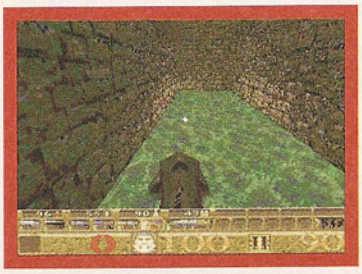
Secret 3: There are three alcoves next to the gold key. One of them is lit up and it's here that you'll be able to open a secret door.

Secret 4: Go from the tower in the middle over the last bridge into the room on the left and you'll see a dagger tile in the ceiling. Shoot it and get the megahealth. There's a *Quake* tile here and pushing it opens the entrance to the secret level which is in the water, leading to secret 3.

Secret level: Underearth







Disgusting, slimy water? Bound to be something handy hidden under there.



By the time you find any armour, you're likely to be in dire need of it.

Secret 1: There's a secret door near the gold key door.

Secret 2: There's red armour under the slime after the gold key door.

Secret 3: There's a special secret if you shoot all the demon faces on this level, but I always forget to do so – it's only a message from the level designers, anyway.

4. The Ebon Fortress

Secret 1: The first secret on this level is quite tricky to find. Try going to the underwater bit opposite you and then to the right of the zombie platform out of the water right near the start.

Secret 2: You'll go down some stairs to the gold key door. Turn around and go down the ramp to the most banal "secret" area of the game.

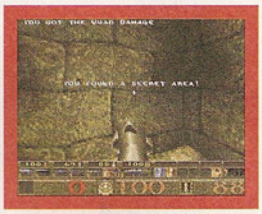
Secret 3: Shooting the wall on the second set of stairs after the gold key door opens a hole in the wall which you can then use to get the Pentagram of Protection.

Secret 4: Get some red armour and a biosuit by jumping off the moving platform into the area with the fiend and an ogre, then dropping into the caustic slime just to the right of the fiend's platform.

5. The Wizard's Manse



Congratulations, you've found, erm, a secret bit of wall. Well done.



Mmm, quad damage. Always useful in a fight, so it's well worth trying to find these secret areas.



Have you noticed the 100% health in every single screen shot? I reckon there's some cheating going on...

Secret 1: There's a secret area inside the column that holds up the bridge into the castle. Jump off the bridge when you've got the nails and then walk around the column until you find a lift.

Secret 2: After getting the gold key, walk back along the walkway and turn right. Look right just before the beam over the walkway and you'll see a suspect bit of wall. Shoot it to get the red armour and carry on to get the quad damage.

6. The dismal oubliette

Secret 1: After you've opened the bars to get upstairs, if you drop into the water you can kill two zombies and get the first secret, which is a quad damage.

Secret 2: This is near the elevator that you take between floors. Sorry I can't be more precise – you get it just after you've killed a death knight. There's an area of wall you can shoot to get a Pentagram of Protection, some ammo and a megahealth.

We'll bring your the last two chapters next month, along with a complete list of bad guys.

SEND US YOUR TIPS!



If you've got some hints, cheats, tips or general good advice on any Amiga games – especially some of the newer ones like Napalm, Sixth Sense Investigations or whatever, then don't keep them to yourself – send them in so we can pass 'em on to other gamers out there who might be having more problems than you.

Also, if you've got a query about a game (and no, we don't really mind people asking about The Secret of Monkey Island), then drop us a line and we might be able to answer it in Helping Hands.

HELPING HANDS • Amiga Format 30 Monmouth Street • Bath • BA1 2BW



PD Select

Dave Cusick trawls through his final PD and Shareware mailbag in search of some choice catches.

Run Old Games

BY: Aldo Bianchi
WARE: Postcard
PD LIBRARY: F1 Software
NUMBER OF DISKS: 1
PRICE: 80p + £1 P&P

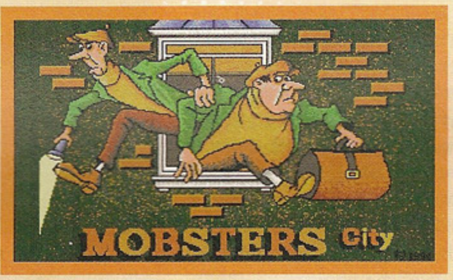
As the highly imaginative title suggests, this is a collection of programs and scripts which enable you to run a variety of old Amiga games on AGA machines.

Basically, what you get are copies of *KickSwitch* and *Degrader*, plus a couple of icons which use the IconX command to call these with simple one-line scripts. We're not exactly talking rocket science here, and in all probability experienced AGA users will have set up similar icons on their hard drives for running their favourite old games several years ago. Still, those who've come to the Amiga more recently may find the scripts to be of some use.

If the *Run Old Games* scripts don't enable you to get a particular game running, the author makes a tremendously helpful suggestion: buy an Amiga 500. Well, blimey, I'd never have thought of that. That's almost as good as his suggestion that if you don't like the appearance of the *Run Old Games* icons, you should send him a bomb. Erm, right.

The disk also contains a copy of Peter Hutchison's *A-Z Dictionary of Amiga Terms 1.0*, which is an extremely comprehensive glossary of common

Mobsters City



These pair of cartoon hoods look strangely familiar.

Although it might not be hot off the production line, as daft simplistic graphical adventures go, *Mobsters City* isn't a bad effort at all.

The scene is set in the rather odd ReadMe which accompanies the game. "Detective Sargeant Silly was singing in his bath whilst playing the banjo overlooking a basket of vipers doing the conga when suddenly the phone rang. Jumping out of the bath D S Silly grabbed the nearest towel to cover his expenses, and skipped along to the phone..." And so it goes on.



Don't let yourself give in to your baser instincts in the pub – it'll only get messy...

The game itself is no less bizarre. Essentially you have to visit various locations in and around Mobsters City and ask passers-by pertinent questions. The objective is to rid the city of twelve gangsters, collecting pieces of a map which will lead you to the Big Boss along the way.

Locations you can visit include the Mobsters City Police Station, wherein you can view a list of wanted gangsters, complete with mug shots and descriptions; the local bar, which is a regular haunt for some of the mobsters; the street corner paper stand where you can pick up important leads; and the local card hall where you can play pontoon and try to raise some much needed funds to help you in your efforts.

Mobsters City isn't at the cutting edge of adventure gaming, but it's enjoyable enough all the same and the humour which is present throughout the proceedings helps to keep the interest level reasonably high.

Despite the statement at the start of the ReadMe saying that *Mobsters City* is Freeware, it's actually Shareware. If you enjoy playing it, the author, Dean Sharples, requests that you send him a fiver for his trouble.







No wonder crime is rife in the town with this pair of jokers in charge.



The paper boy's always good to lean on for some information, and he comes cheap too.

BY: Silly Software
WARE: Share
PD LIBRARY: F1 Software
NO OF DISKS: 1
PRICE: 80p + £1 P&P

Wizzy's Quest

Selection OF THE MONTH

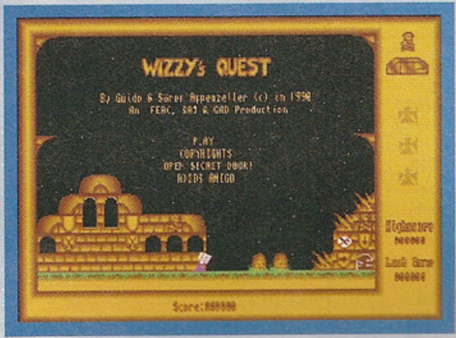
W*izzy's Quest* **has been around for years, but it's a real gem of a platform puzzler which is as fresh and original today as it was when it first appeared.**

The game has fifty levels and on each the objective is to free your master, who is held captive, and find a route to get the pair of you to the exit. Along the way there are monsters you'll have to avoid and some awkward platform layouts to overcome.

Wizzy has a special magical trick up his sleeve: he can conjure up platform blocks from thin air and then make them disappear again once they've outlived their usefulness. He can use these blocks to give himself and his master a way of moving around the levels when no other route presents itself. He can also use them to restrict the movement of monsters which might otherwise cause problems for the two magicians.

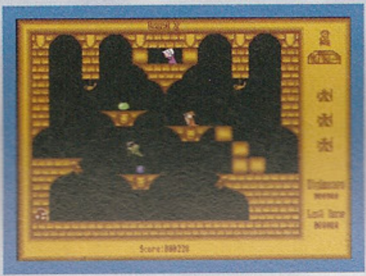
There are also a host of other objects and puzzles scattered around the levels, such as keys for locked doors, magical transporters and so on.

Graphically and sonically, ***Wizzy's Quest*** **is competent but unexceptional, but where this game really excels is in the playability department. It's thoroughly absorbing and extremely challenging as you progress deeper into the game. It might sound remarkably simplistic, but in actual fact this is one of the most engaging puzzle games I've played in a very long time.**











Successive levels come as you might expect, with increasingly mean baddies.





Plan a route before freeing the master – he'll head straight to the bottom once he's released, *Lemmings* style.

BY: Guido & Soren Appenzeller
WARE: Free
PD LIBRARY: F1 Software
NO OF DISKS: 1
PRICE: 80p + £1 P&P

Amiga terminology. If you don't know your Boopsi from your Buster, or your SANA-II from your Static IPs, then this is well worth a look, although you should be aware that at the time of writing this column version 1.1 has just appeared on Aminet.

EvenMore

BY: Chris Perver
WARE: E-Mail
PD LIBRARY: Classic Amiga Software
NUMBER OF DISKS: 1
PRICE: £1 + 75p P&P

How many variations have there been on the *More* theme over the years? *More, PPMore, MuchMore*… the list is a lengthy one and yet people are still designing new text viewers for the Amiga.

In the case of *EvenMore* though, there's actually a point to the program. If you can imagine a program with the text viewing capability of *Multiview* but with a host of enhanced functionality to complement this then you're somewhere close to picturing *EvenMore.*

The program is, of course, font sensitive, and offers smoother scrolling than many of its rivals. It also provides a configurable user interface which lets you get at the features you want with the minimum of hassle, a bookmarks system which lets you pinpoint positions in the document that you'd like to be able to return to quickly, a fairly decent Find function and many other useful features too.

You can open up to 1,000 files simultaneously (memory permitting, obviously), either on any public screen or on the program's own public screen. You can even move the program window between different public screens if you need to.

A document viewer might not sound like the most exciting new program in the world, but if you think about how often you use software of this kind then it's easy to see the value in having an easy to use and highly functional program such as *EvenMore* on your hard drive.

AmiMSX

BY: Juan Antonio Gomez Galvez
WARE: Share
PD LIBRARY: Classic Amiga Software
NUMBER OF DISKS: 1
PRICE: £1 + 75p P&P

Those of you who were into computing in the early to mid '80s may well have owned, or at least known somebody else who owned, an MSX computer. The MSX family of computers were an early attempt at creating a standard home computer system which could be manufactured by a whole range of companies. MSX machines quietly faded into obscurity as the '80s wore on, but there are still a die hard bunch of MSX users out there, as a glance at the dozens of MSX sites on the web will confirm.

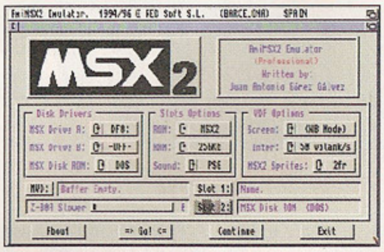
The MSX2 was an 8-bit machine introduced in 1985 and manufactured by various companies, including Sony, Sanyo, Yamaha, Mitsubishi, Toshiba and Philips. It was based on the original MSX machine which used the Z80A CPU, but the MSX2 featured 64K of memory (or 256K in the case of Sony MSX machines) and ran *MSX-BASIC,* which was an enhanced version of *Microsoft BASIC 4.5.*

AmiMSX2 is a Shareware program which emulates the MSX2 on the Amiga. It doesn't do it in a particularly system friendly way as it freezes Workbench in an effort to produce

Continued overleaf ➡

smoother emulation, and it's not entirely compatible with '040 and '060 machines, although it runs quite happily on '020 and '030 systems.

However, it seems to be quite a competent simulation of the MSX2, and even on an '020 machine it runs faster than the program author's actual MSX2 machine.



The '80s revival continues apace...

ONLINE UPDATE

An interesting program called *UnInstaller* appeared recently on Aminet. The idea behind it is nice – to provide a clean, quick and easy way of uninstalling programs as, for instance, on Windows PCs. However, as you'll know if you use Windows machines regularly, programs not written to take advantage of the uninstallation software invariably fail to uninstall properly.

The Amiga *UnInstaller*, unfortunately, requires programs to specifically support it if they are to uninstall cleanly, and of course, as yet, nobody has written a program which does support it. Still, it might be one to watch for in the future. For more details, check out the support page at http://www.trogsoft.freeserve.co.uk/product/amgad/uni/

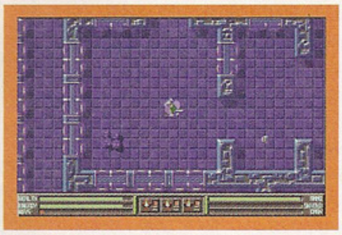
The first MegaDrive emulator for the Amiga has also just appeared in beta form. It's available via Aminet or from the author's homepage at http://www.amidog.com/amigenerator/ and it comes in standard 68000, '040 and PPC flavours. Of course, downloading and using images of MegaDrive cartridges probably breaks copyright laws, but as a quick search of Altavista will confirm, there are plenty of people who trade the things anyway.

Finally, there's been a minor update to *SongPlayer*, the versatile audio file player. *SongPlayer* is capable of playing samples in IFF, WAV and AU formats amongst others, and can also play MPEG 1 layer 3 (MP3) files. Version 1.53 really only includes a couple of small bug fixes, but if you haven't taken a look at this excellent program before then it's high time you did.

Captain Carnage

BY: Dan Reynolds
WARE: Licence
PD LIBRARY: F1 Software
NUMBER OF DISKS: 1
PRICE: £3.99 + £1 P&P

Captain Carnage, which is subtitled *Alien Exterminator*, is a run-around-and-shoot-things game in the mould of the ancient 8-bit hit *Icarus*, not to mention the classic Amiga game *Alien Breed*.



That's you in the middle, armed to the hind teeth and itching to lay waste to some alien scum.

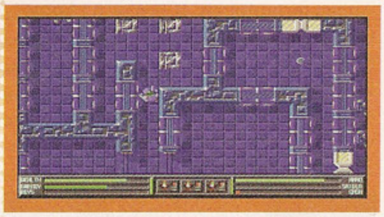
You play the part of the eponymous Captain, charged with the task of single-handedly saving the Earth. A large alien vessel has been detected on the edge of the galaxy and it's destroyed all of the starcraft which have been sent to investigate it. It's currently heading straight towards the earth and unless you beam on board and blast every last occupant to high heaven then it looks like curtains for humanity.

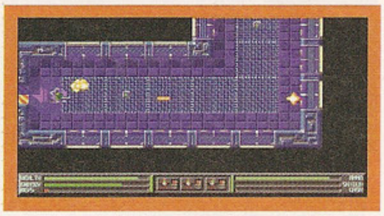
The action is viewed from overhead and you have to race around the levels zapping every alien you encounter with your trusty blaster, or whatever extra weapons you can find along the way or purchase from conveniently located weapon-dispensing computers.

You'll need to keep an eye out for various pick-ups, such as first aid packs which restore your energy levels, bombs, and keys with which to open locked doors.

Captain Carnage offers good, clean, uncomplicated blasting fun. Graphically it's far from stunning but the action moves at an impressive pace and there are some nice beefy sound effects and a few bits of sampled speech which add to the gaming experience.

As this is a complete Licenceware game, there's a whole set of levels to explore, which should keep action fans busy for quite a while.





Plenty of fun for trigger happy gamers.

Buzzy

How's your French? In the years since most people stop learning it they endeavour not to employ any more French than is strictly necessary, to the extent that they can more than happily ask for a flame-thrower, describe a room as having lots of cupboards, ask a penfriend about their hamster and, frankly, say very little else.

Fortunately I'm still able to read the language reasonably well and can make educated guesses as to what's being said. This is just as well since the documentation for *Buzzy* is entirely in French and without the ability to read at least some of the documentation I might have passed over this extremely slick little platformer.

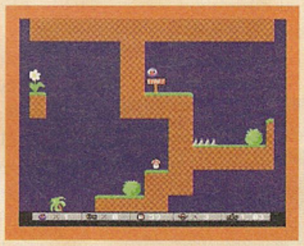
You play a bloke who, along with his family, has been abducted by aliens in the middle of a dark, stormy night, and has apparently turned into a bouncing ball for their amusement. You awake to find yourself stranded on a strange island and you must find your family by travelling through this curious place, collecting lollipops and eating mushrooms along the way. It really makes you wonder what some of these computer game authors get up to in their spare time, doesn't it?



The island is made up of a series of scrolling platform levels. These are littered with the aforementioned mushrooms and lollipops, along with trampolines on which you can bounce in order to gain access to awkwardly located platforms. There are also plenty of nasty spikes scattered around too, and if you land on these too many times you'll puncture yourself and that will be the end of your adventure.

***Buzzy* is tip top platform entertainment and even if there isn't an awful lot of variety in the gameplay it's hard not to enjoy it immensely. What's more, it comes with an editor which, if I've understood the documentation correctly, enables you to create your own colourful, fully interactive worlds so that you're free to let your imagination run wild. How's that for a translation then, Madame Edwards? C'est formidable, je pense. Et non... je n'aime pas les cornichons, murky buckets.**





Once you get the hang off it, *Buzzy* quickly becomes great fun.



BY: Amiot Loic
WARE: E-Mail
PD LIBRARY: Classic Amiga Software
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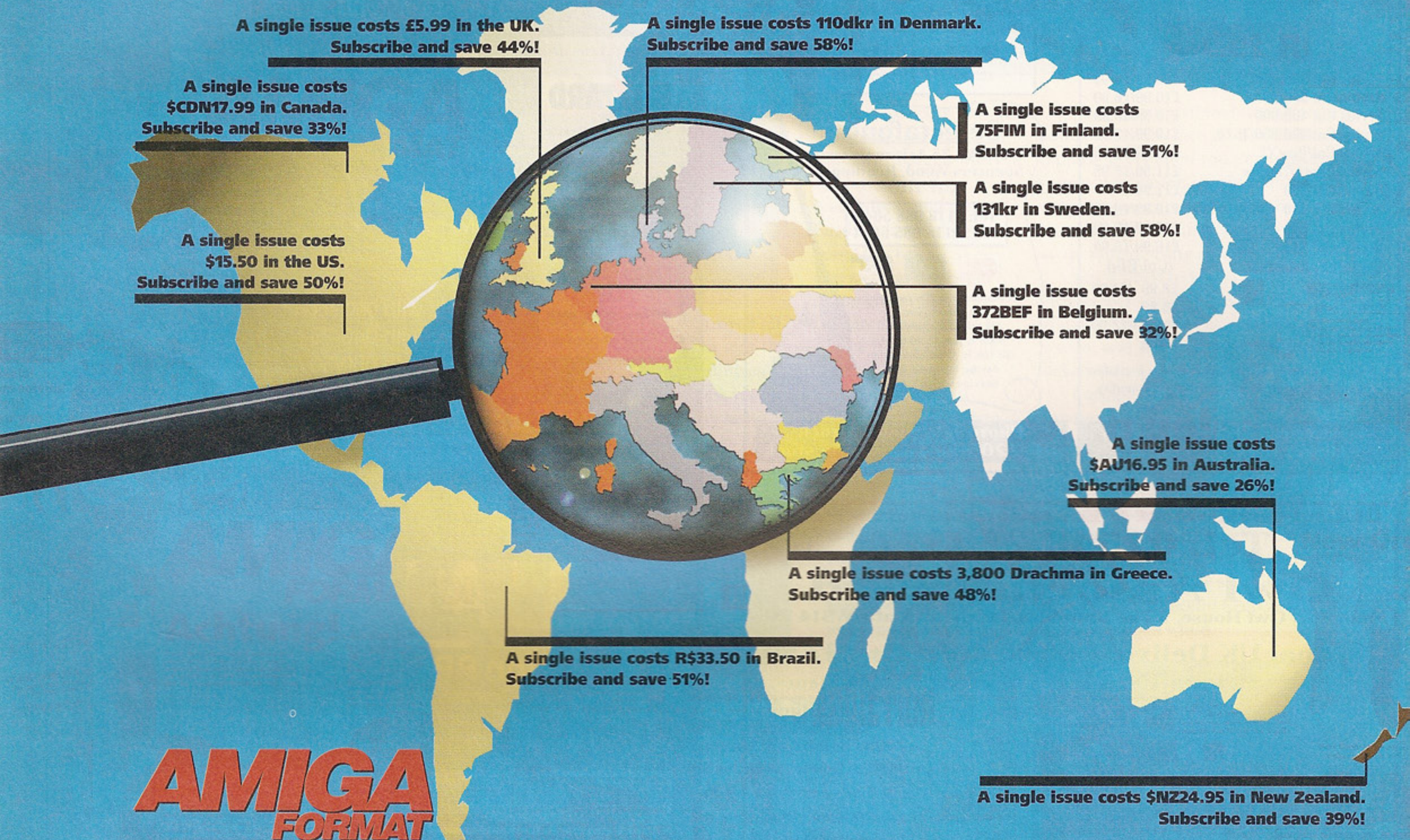
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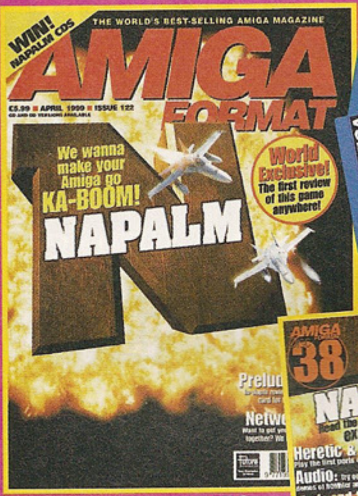
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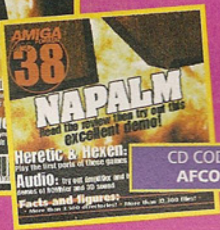
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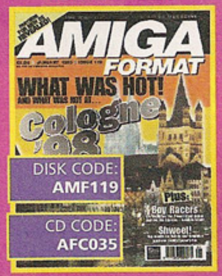
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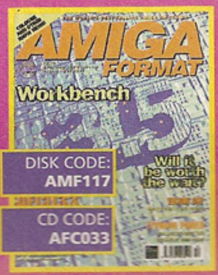
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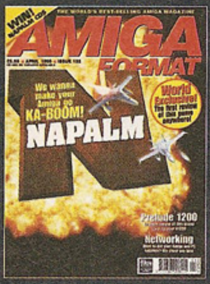
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SERIOUSLY AMIGA

In-depth reviews of hardware and software that you can trust.



Hmm. You might not be so sure about your accelerator's excellence after Simon Goodwin gets through with edificatin' you, but it's all for your own good. We've got a fine range of software this issue, including the long-awaited *TurboPrint 7* and the even-longer-awaited *PowerMovie*. It seems that next issue will be more hardware-oriented as we'll take the first look at the new iomega Zip 250!

So stay tuned peeps, and be prepared for us to bring you definitive reviews of all that's hot and all that's not in the Amiga world, as soon as it happens.

Ben Vost

AMIGA FORMAT'S REVIEW POLICY

... is very simple. ***Amiga Format*** is written by nearly all of the most experienced Amiga users in the world and what we say goes. OK?

WHAT OUR REVIEW SCORES MEAN

90+%	The crème de la crème. Only the very best, most versatile and effective products are awarded an ***AF Gold*** – the most highly prized rating there is.
80-89%	These products are very good, but there are minor flaws or areas that could be improved upon.
70-79%	Not a bad product but quite possibly one that needs a serious update.
60-69%	Average products with somewhat limited features and appeal. Products in this category tend to be flawed.
50-59%	Below average products which are unlikely to impress your mates or your wallet. Avoid.
40-49%	Overwhelmingly poor quality products with major flaws.
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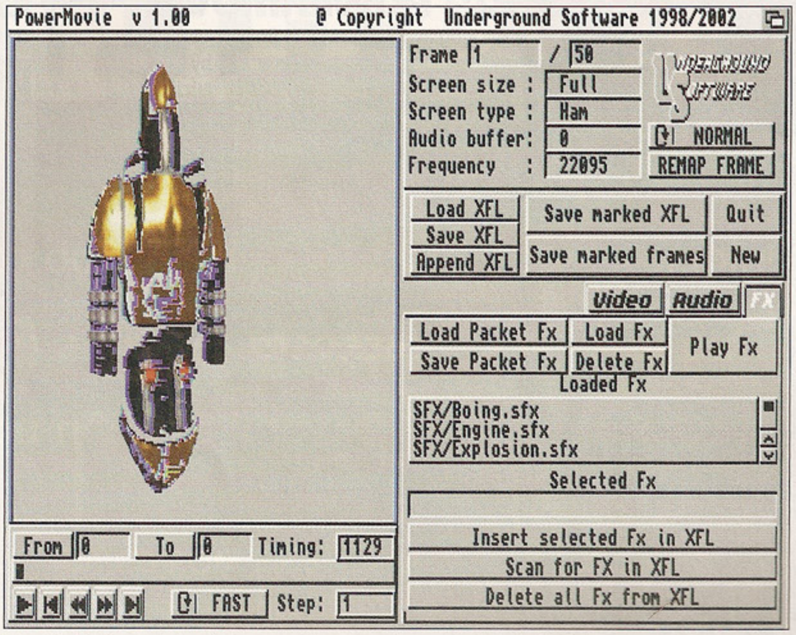
PowerMovie

Nick Veitch gets animated about ***Power***'s new movie creation software.

While other platforms have formats like *AVI* and *Quicktime* (now becoming as popular on the PC as it has been on the Mac), the Amiga has been a bit left out.

The structure of these formats doesn't lend itself well to display on the Amiga's native screen modes, and such translations of the *AVI* and *QT* players which have been made are rather slow and unpredictable. There's definitely scope for an Amiga-specific animation/audio format which can deliver near real-time speed, and also take advantage of the Amiga's natural video capabilities.

The XFL format used by *PowerMovie* is reasonably compact, includes provision for an 4-channel soundtrack and spot effects. The effects can be synchronised to individual frames so you can make an action-synched full audio/video sequence if you have the patience. There are no timeline-type editing tools as you might find in other video editing systems so everything relies on you individually marking particular frames.



Sound effects can be loaded or saved as a "packet" – the XFL holds the timing info but the packet holds the location for the iff samples.

> **To build a PowerMovie sequence, all you have to do is prepare a number of frames in a suitable format.**

To build a *PowerMovie* sequence, all you have to do is prepare a number of frames in a suitable format. A number of modes are supported, but if you want to be able to see the results played back at a reasonable speed on an average Amiga, you'll want to stick to small resolutions. 320x200 gives very smooth results and is great for video.

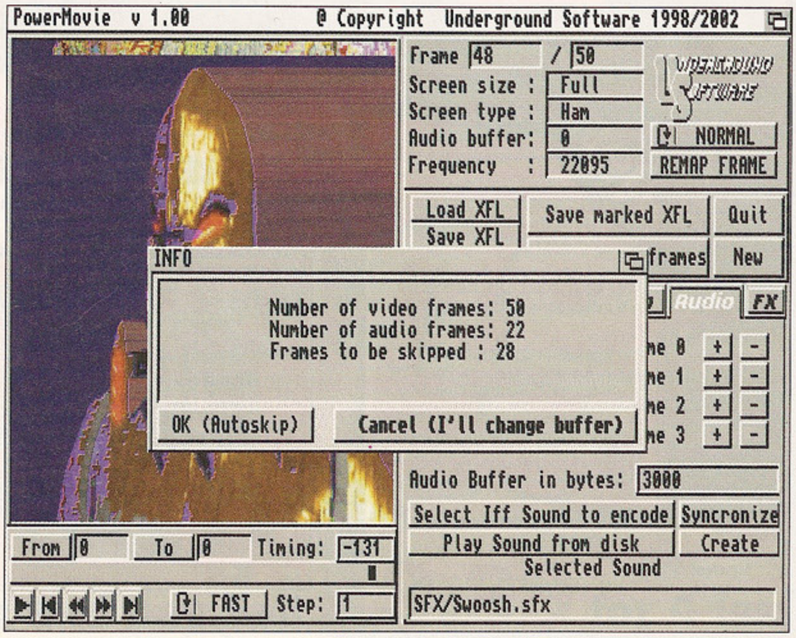
PowerMovie uses an intelligent frame gathering system so it's only necessary to specify the first and last frames and it'll grab the whole sequence, if the frames are numbered consistently. Another thing to bear in mind is to render the frames to an Amiga screenmode and save them as IFFs as using different file formats is just going to be problematic, although *PowerMovie* can theoretically support DataTypes.

It can take a while to encode the XFL, though you should be used to this sort of wait if you've managed to generate all the frames in the first place. A 100-frame HAM8 anim will take around 10 or 11 minutes to create on an '040-based Amiga.

CONTROLS

It's a bit odd having the frame counter in the top right of the screen, rather than down with the actual motion controls, but you can get used to it. By selecting new start and end frames, you can save or delete a selected range of the animation. This is very useful for final editing, but you'd really be a lot better off getting the whole sequence straight from the beginning.

The layout of the main *PowerMovie* screen is a little cramped. Although everything is legible and easy to get at thanks to the section tabs for audio,



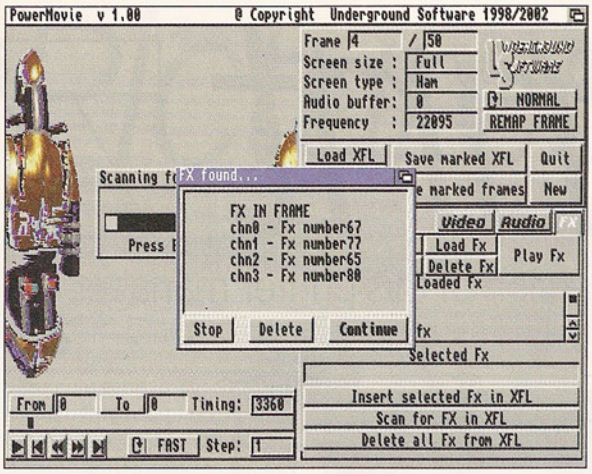
Matching your audio track to the XFL frames can involve a fair degree of guesswork in allocating the audio buffer.

MODES

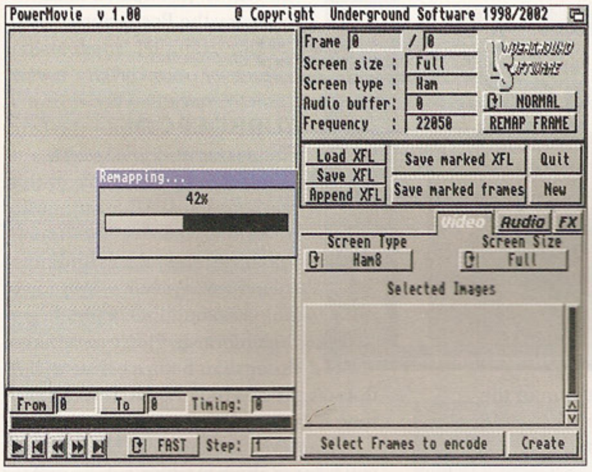
Only two forms of animation are supported in *PowerMovie* – 256-colour mode and HAM8 mode. HAM8 gives a better approximation of true colours, but it also requires a bit more processor power.

Unfortunately, because of the nature in which the software works, the programmers tell me it'll only work with AGA machines. In other words, just because you have a CyberVision or Picasso board on an older Amiga doesn't mean you can run this software – it requires the AGA chipset. Future versions may address this problem though, so keep watching the *AF* news pages.

For some reason, the editor itself opens a standard Amiga screen when it should be possible to redirect it through a graphics card (in fact you can with various Shareware utilities). Updates of the program will hopefully offer the choice of more pleasant screenmodes to work in.



You can scan existing XFLs for information on effects already allocated, and find out which channel they use.



This is something you'll see a lot – it only takes a few seconds to remap a HAM8 frame, but it seems like much longer.

IN REAL TIME

The CDXL format was essentially the first CD-based file format which could deliver something approaching full motion video, albeit in a reduced screen size. The problem is simply one of bandwidth. A 256-colour screen at a standard video resolution of 640x256 (i.e. without interlace or overscan) is equal to 160K of memory. Now try running that at full motion speed (25 frames per second, although some animation is done at 12 frames per second) and you'll discover that you need to be able to shift 4Mb of data a second, never mind the audio data.

One solution to this is to compress the information in the file, which can be done in a number of lossless (RLE, Huffman, etc,) or lossy (JPEG, MPEG, etc) ways to reduce the required bandwidth to a more reasonable level. Remember that with a standard 4-speed CD you're talking about a 600K/second maximum transfer rate. The only problem with this is that your processor now needs to be capable of decoding all the image data and writing it to the graphics memory on the fly, and just to make things worse, the better compression methods tend to require more and more processor time for uncompression.

So what you essentially end up with is a compromise between the bandwidth of the storage media and the processor power of the machine you're running on. *PowerMovie* strikes its own balance on this seesaw and adds some cunning tricks with the PAL display modes to get the best ratio.

Why is the ability to display full (or near full) motion video so important? Well, if you could get a reliable display speed you could use it to dump animations onto video easily and, more to the point, you could display animations in all their glory on screen without having to dump them to video. Multimedia presentations, intro sequences and real animations with high colour resolution graphics then become a real possibility.

video and effects, you can't help thinking that it would've been better off using floating palettes on a larger screen.

> *In playback it works fine. If you've seen the demo of the game Golem on our CD, you'll know this already.*

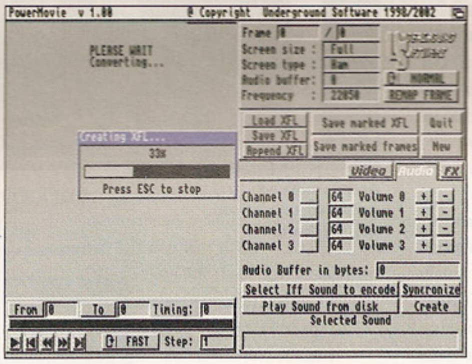
AUDIO

Matching audio to your frames can be just as tricky. Like the old tools for creating CDXL files, you have to allocate a sound buffer which represents the number of bytes per frame which will hold sound data.

If your sound is the background music for your animation then you'll obviously want it to last for the complete sequence, but you'll have to fiddle the buffer numbers up and down to get it exactly right – too much buffer and the sound plays too quickly and is over too soon, too little buffer and it sounds terrible.

The effects can be added in to start on specific frames, and using specific sound channels if you want to recreate some particular stereo effect. The effects are stored as "packets" which can be loaded in when the standalone player is used. You can play the XFLs you've created directly through the editor so the standalone player is only useful for distributed files.

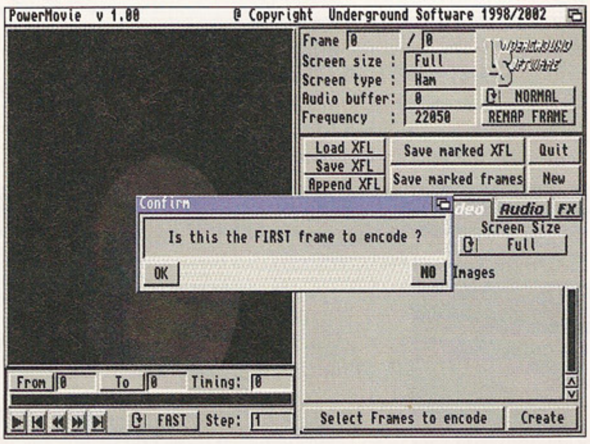
In playback it works fine. If you've seen the demo of the game *Golem* which was featured on our CD, you'll know this already. Of course, you have to be aware that some people might not have the same spec of Amiga as you, but at Low Res NTSC resolutions you should always get a fairly smooth playback.



Creating the XFL takes some time, around 10 or 11 minutes for 100 frames on an '040.

NIGGLES

Aside from the interface, there are a few quirks to the software. Make sure your sound files are in a proper IFF format for a start, otherwise results can be a bit unpredictable. Editing isn't the easiest thing to do as when you scroll through the frames with the slider bar, you have to wait each time you stop for the image to be remapped and HAM images aren't always displayed properly on the editor screen. Overall though, the results are well worth the hassle and hopefully future updates will fix these few niggles.



The intelligent frame gatherer can work out your indexing system, but it does get confused sometimes.

SUPPLIED BY: Power Computing (01234) 851500
PRICE: £34.95
REQUIREMENTS: AGA Amiga, CD drive.

Pros and Cons

- \+ Smooth playback.
- \+ Supports HAM8.
- \+ Multichannel audio and effects.
- − Cluttered interface.

OVERALL VERDICT:
Has a few quirks, but that it works at all is fantastic.

85%

TurboPrint 7

Tony Horgan tests the latest version of this printer manager.

As with so many features of our Amigas, the standard printer driver system is well out of date. Originally designed when dot matrix printers were commonplace, the printer.device can only handle outputs with a maximum of 4,096 colours or 16 greyscale shades. Fortunately, like so many of those outdated features, third party software has stepped in to bring us up to date with photo realistic 24-bit printers. *TurboPrint* provides a replacement for the printer.device and a lot more to boot.

You can use *TurboPrint* in a number of ways. In its simplest form, it's a transparent software printer interface that allows for high quality output from any application with a print function. Once you've set it up you could forget all about it – there's no need to go messing around with it each time you want to print something new. However, if you want to get the most from it you'll need to know about the other bits and pieces that make up the full package, namely the *Graphics Publisher*, *TurboSpool* and *GNU Ghostscript*.

THE GRAPHICS PUBLISHER

This is a modest but incredibly useful tool, best used when you want to print a single image or a selection of pictures, maybe with some text. It's simplicity itself to use. Just select the size of your paper, then load and position your pictures on the page, scaling them as you like. Text can be added using any fonts on your system, either typed directly onto the page or imported.

Smoothing options are included to improve the output quality of enlarged images. This is especially useful if you use *Graphics Publisher* in Poster mode, in which you can output massive posters made from tiled pages of A4 or A3, or whatever size of paper you're using. I've never managed to get it to print right up to the edges of the page, which is a pain, although I haven't found out whether that's a limitation of the printer or the software. Previously you could only view the full page, so any precise alignment of objects had to be done by entering measurements into little boxes, but now you can zoom in to make precise alterations.



An example of *TurboPrint 7*'s photo realistic output.

We output a page using *Graphics Publisher* to drive an Epson Stylus Photo printer at 720x720dpi. The source image was a 1152x900 pixel JPEG. Printed at roughly 10x9cm, a keen eye could make out the original pixels, which is testament to the clarity of both the printer and the software driving it. Printed at half that size (we did both), the naked eye could only detect very subtle dithering when scrutinised at close range. In short, it passed the photo realistic output test with ease.

> *The Graphics Publisher is a modest but incredibly useful tool, best used when you want to print a single image...*

GHOST IN THE MACHINE

The *GNU Ghostscript* interpreter is probably the biggest addition to version 7. Detailed instructions are included in the version 7 manual addendum for printing as Postscript from *AdPro*, *DrawStudio*, *Final Writer*, *ImageFX*, *PageStream*, *Picture Manager*, *TurboCalc* and *Wordworth*. This should lead to higher quality output and faster print times. *GhostScript* also offers a brilliantly simple method of outputting Postscript files that you might receive from other DTP systems, from the net or CD-ROMs. Just open a Shell and copy the Postscript file to PS: (for example, "copy frontcover.ps to PS:").

TURBOSPOOL

Finally there's *TurboSpool*, a background print manager that takes care of all your output. It intercepts your documents on the way to the printer and puts them into a queue. Now you can print multiple copies of a document via *TurboSpool* even faster than before because it doesn't process the original file each time it's printed.

TurboPrint is an essential purchase if you want to use a modern colour printer with your Amiga. This is a real 'package' in the sense that you get a proper manual (well, one manual and two comprehensive addendums), which is becoming something of a rarity these days. It's got a whole load of new printer drivers too, so if you haven't done it already, now could be the time to upgrade that crusty old teletype machine sitting under your desk.

NEW FEATURES

- Postscript device emulation.
- Graphics Text mode for printers with no text mode.
- Zoom function in *Graphics Publisher*.
- *TurboSpool* improvements.
- New printer drivers.

SUPPLIED BY: Eyetech (01642) 713185
PRICE: £38.95 (upgrade £19.95)
REQUIREMENTS: OS2.0 (hard disk for TurboSpool/Ghostscript)

Pros and Cons

- + Photographic output from modern printers.
- + Provides direct output of Postscript files.
- + Improvements to *Graphics Publisher*.
- + Massive printer driver collection.

OVERALL VERDICT:
An absolutely essential purchase if you use a modern printer.

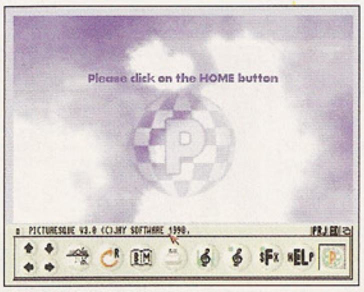
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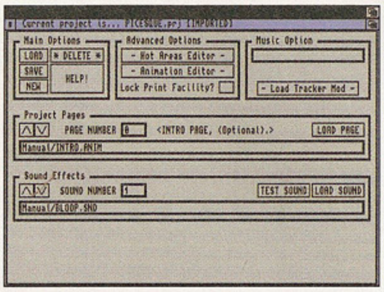
Picturesque v3.0

Richard Drummond looks at this new multimedia application. Is it just one buzzword too many?

Picturesque is a simple hypertext system. It consists of two components: a freely-distributable viewer for displaying finished documents and an editor to create them. The viewer's navigation controls will be instantly familiar to anybody who's used a web browser.

The system is provided on three floppy disks and installation is via a custom tool. While this is prettier than the official installer, software should employ the standard one, if only to give a consistent and reliable interface. The supplied documentation is in the form of a *Picturesque* project. This is clear to follow and is a good example of how to use the system.



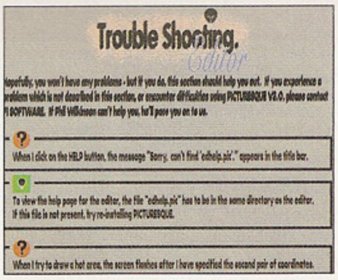


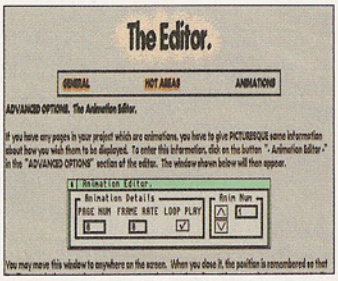
The *Picturesque* viewer showing the introductory animation (above) and the editor (above right).

HOT STUFF?

A *Picturesque* project is made up of pages. A page can either be a picture (any IFF ILBM or DataType-supported graphic format), an animation (IFF anim 5 or 7), ASCII text or a script. Each page must be constructed externally; pictures in *PPaint*, say, or text pages in a text editor. Projects may additionally be accompanied by a tracker music module.

Pages can also contain "hot areas", boxes in which the user may click to perform an action. This feature works in a similar way to image maps in HTML. A hot area may transport the user to a new page or execute an AmigaDOS script, and optionally play an IFF sound file. Such sound effects aren't played asynchronously; that is, the user must wait for the effect to finish before proceeding. This slows down an already slow system. Combined with the lack of any visual feedback on clicking hot areas, the end result is frustration.





The two screenshots above are from the *Picturesque* documentation.

It isn't possible to mix page types. The only way to combine text and graphics on one page is to do it with a paint package. Text pages themselves are basic. There are no layout commands provided; the text is formatted exactly as in the source file. The text font and colour may be altered, though, by means of HTML-style tags.

The *Picturesque* viewer will display the current page with a control panel at the foot of the screen. Pages wider than the screen get clipped; taller ones may be scrolled up or down via the control panel or cursor keys. Controls are provided to move to the next or previous pages and to return to the home or menu page. A retrace feature is also included, but doesn't function in the way you'd expect: if you were to view the pages A, B and C in sequence and then press retrace, you'd be returned to B; pressing it again gets you to C.

GETTING IT TOGETHER

The editor is the storyboard in which you link together the components of your project. It has a simple *Gadtools* interface which opens on its own non-configurable custom screen and uses the dreaded system-default topaz font. The main part of the GUI is where you define the pages. Pages are identified only by number; you merely select the desired page number via an up/down gadget and tell the editor which file is to be used for that page via a string gadget/pop-up requestor combination.

If a particular page is an animation, its characteristics may be configured by a pop-up window. Hot areas are defined in another window and are again identified only by number. You may select the number of the page on which the hot area appears and the destination page; if this target is a script, you flag this here. The position of the defining box may be drawn on the target page with the mouse.

Although the editor isn't complex to use, it is tedious and non-intuitive. A better method, for example, would have been to use labels to identify pages. These could then be shown in a standard listview gadget with add and remove buttons. Pages targeted by hot links could be selected by drag and drop or via a pop up list. A rethink is definitely required.

IDENTITY CRISIS

The main problem with *Picturesque* is that it doesn't know what it wants to be. *Picturesque* began life as a simple picture viewer; unfortunately, it hasn't progressed far enough from there.

SUPPLIER: F1 Software (01709) 888127
PRICE: £9.99
REQUIREMENTS: Any Amiga

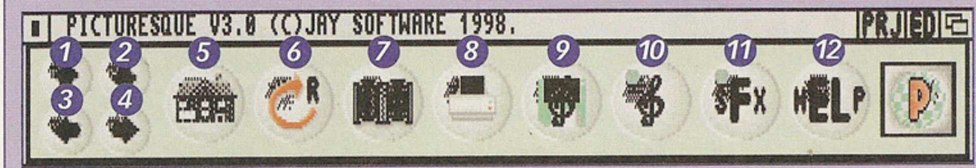
Pros and Cons

- \+ OS friendly.
- \+ Good documentation.
- − Badly designed editor GUI.
- − Poor text layout ability.

OVERALL VERDICT:
A potentially useful package but needs a lot more work.

60%

THE CONTROL PANEL



1 Scroll up page. 2 Scroll down page. 3 Previous page. 4 Next page. 5 Home page. 6 Retrace. 7 Bookmarks. 8 Print. 9 Select tracker module. 10 Turn music on/off. 11 Turn sound effects on/off. 12 Online help.

Delfina 1200

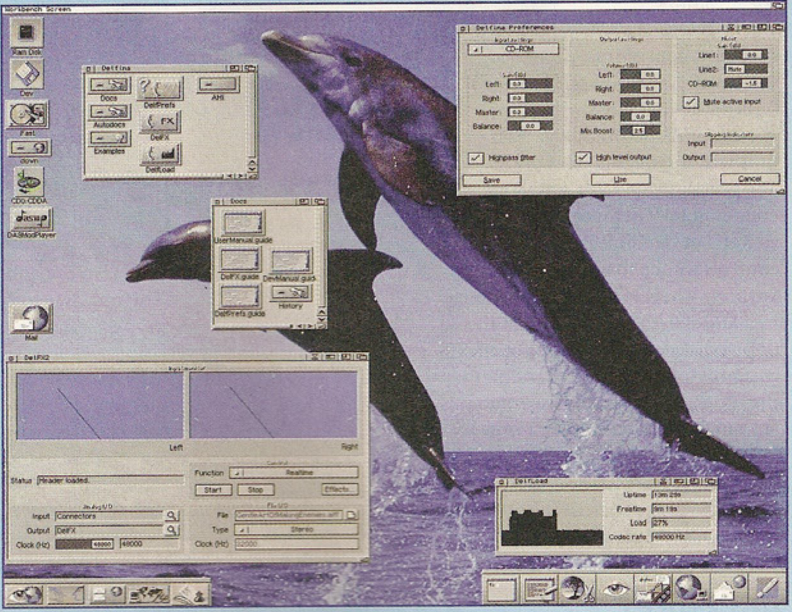
Ding ding, round two. *Delfina 1200* steps up to stake its claim for the title of Best A1200 Sound Card. Tony Horgan annoys the neighbours...

After spending the last seven years or so making do with 8-bit sound on our A1200s, we suddenly have three ways to upgrade to 16-bit. Last issue I looked at Prelude 1200. There's another one called Melody 1200 just around the corner, and this month we've got Delfina 1200. It's a bit of a mystery as to why it's taken so long for everyone to catch on to the possibilities of the clock port, and why everyone seems to have had the same idea at the same time, but let's not grumble. Better late than never.

> **"The trump card up Delfina 1200's sleeve is that it's based around a DSP (Digital Signal Processor)..."**

If you really wanted to you could have got a 16-bit sound card for your A1200 by adding a Zorro expansion, but that's a lot of expense to go to if a sound card is all you want. More recently there's the cheaper option of a single Zorro expander, but these clock port sound cards still seem to make more sense if you're not interested in any other major expansions.

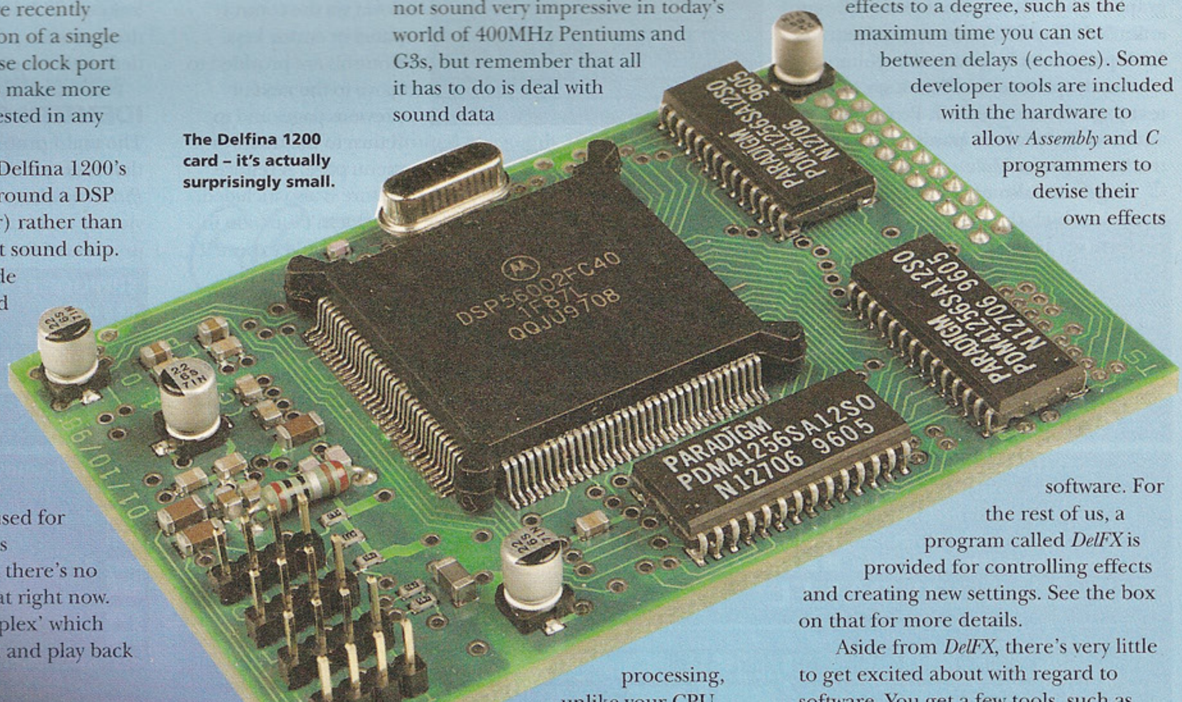
The trump card up Delfina 1200's sleeve is that it's based around a DSP (Digital Signal Processor) rather than just a 16-bit in/16-bit out sound chip. This means that alongside the normal sampling and playback features, it offers things like delay, phaser and distortion effects in real-time with no extra strain on your Amiga's CPU. In theory, the DSP could probably also be used for non-musical jobs, such as graphics processing, but there's no software available for that right now. The hardware is 'full duplex' which means that it can record and play back at the same time.



A selection of other bits and pieces is included for setting up the preferences and keeping a check on the DSP load.

PROCESSED CHEESE

The DSP on the card is a Motorola 56002 chip, rated at 37MHz. That might not sound very impressive in today's world of 400MHz Pentiums and G3s, but remember that all it has to do is deal with sound data processing, unlike your CPU which has to run your whole computer. It uses 24-bit bandwidth for its processing, which allows for cleaner effects than 16-bit bandwidth, although sampling and playback is in 16-bit. The card uses three SRAM chips, each of 32K, as temporary buffers for storing sound data for delays and such like. The size of these limits the effects to a degree, such as the maximum time you can set between delays (echoes). Some developer tools are included with the hardware to allow *Assembly* and *C* programmers to devise their own effects software. For the rest of us, a program called *DelFX* is provided for controlling effects and creating new settings. See the box on that for more details.



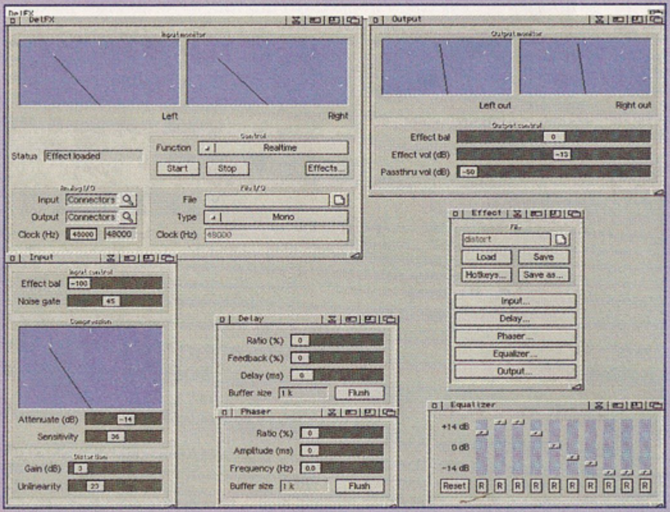
The Delfina 1200 card – it's actually surprisingly small.

Aside from *DelFX*, there's very little to get excited about with regard to software. You get a few tools, such as *DelfLoad* which shows how hard the DSP is working with a little scrolling graph, *DelPrefs* which is used to set input and output sources and volumes, and a few CLI commands. A customised Delfina version of *AudioLab16* is included (see

CAUSE AND EFFECT

Access to the effects features of the hardware comes via a little software tool called *DelFX*. This is a simple *MUI*-based set of control panels which allows you to select and edit the effects which process the incoming or outgoing sound from the card. I was disappointed to see that this part of the software suite doesn't seem to have changed since I used it with the original Zorro version of Delfina some time ago. You can choose from a list of about a dozen preset effects settings, create your own from scratch or edit the presets. Most disappointing of those is the reverb, which isn't really a reverb at all – it's a delay. A reverb algorithm needs very subtle simulations of sound reflections and this one just doesn't cut it. That may be a limitation of the DSP itself, as no amount of tweaking of the basic delay settings gave me any better results.

If you want to make your own effects, you have to work with quite a simple set of tools. There's the input stage, at which you can add compression, distortion and alter the gain, then there's the delay section, a phaser, a 10-band equaliser with 14dB of cut or boost in each band, and finally the output stage which is used to define the mix of source and processed sound.


Here you can see the various effects windows of the *DelFX* software, used to control the DSP functions on the Delfina card.

the Prelude review for more on that) and you get a registered version of the sample editor *SoundFX* which can be used with Delfina 1200 via *AHI*, which is also included. It's a bit of a rag bag of software, and next to the solid marriage of Prelude 1200 and *Samplitude*, the Delfina package is left looking like a job half done.

Like Prelude 1200, Delfina 1200 comes with an alternative toccata.library to allow it to be used with Toccata-specific software, although only playback features are supported, so the functionality of *Samplitude*, for example, would still only be partial. This should allow you to use it with *OctaMED SoundStudio* (you need this because the built-in Delfina output mode doesn't work with Delfina 1200). However, my continued attempts to get it to play ball have lead to nothing but crashes and freezes. Maybe you'll have better luck.

This leaves *AHI* as your main option for software compatibility. I like the idea of *AHI* but I must admit, in practice I find it a pig to use. It needs lots of CPU power and has a habit of turning your silky smooth multi-tasking machine into a lurching, unresponsive hippo. Things are much better if you've got an '060 powering things (which I don't at the moment), but even then it's far from the ideal solution.

It's fine for occasional recording or playback of 16-bit audio files, spooling long MP3 files and that kind of thing, but you'd need a lot of patience to rely on *AHI* for the bulk of your music or audio editing jobs. Games are increasingly using *AHI* for their music and sound effects (*Quake*, for example), although if you're that much of a perfectionist that you don't want to use 8- or 14-bit Paula *AHI* output with your games, I'd assume you also have a graphics card, in which case you've probably got a Zorro'd Amiga.

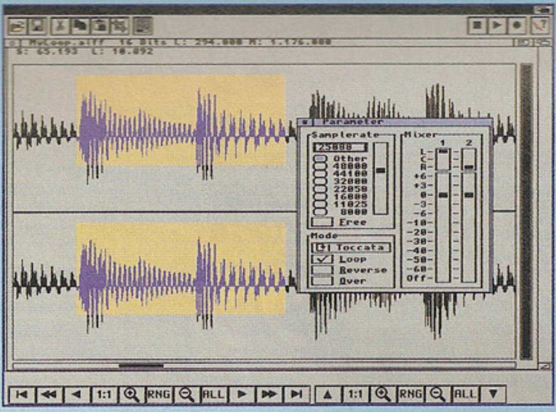
Then again, you could have a BlizzardVisionPPC, but that's not clock port-compatible. Oh dear, I think I'll stop trying to guess what system you have. Aaaanyway...

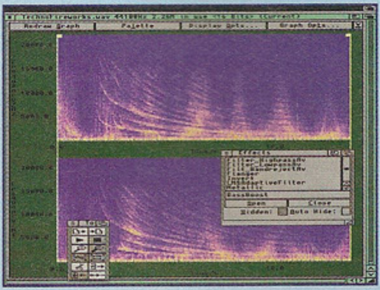
I do wonder when hardware developers will learn that without good software their products are wasted. Granted, if you get it working with *SoundStudio* via the toccata.library, or if you're a fan of *AHI*, you shouldn't have a problem. Delfina 1200 desperately needs direct compatibility with at least one big audio application. It's not as if this is a new bit of hardware – it's virtually the same as the Zorro version, so there's been ample time to get some good software up and running.

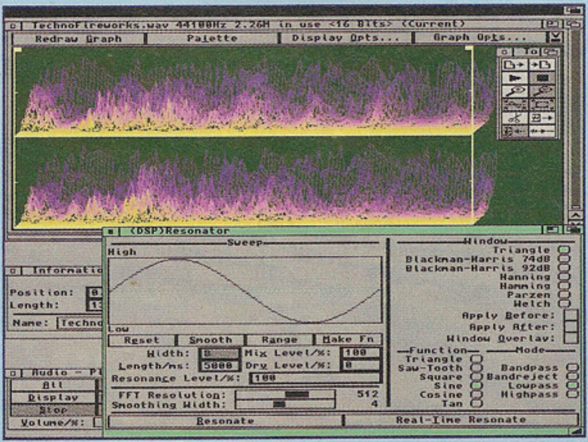
The unique selling point of Delfina 1200 is its DSP and *DelFX* is the only bit of software that gives you any access to the DSP functions – that hasn't been updated since 1997.

Continued overleaf ➡

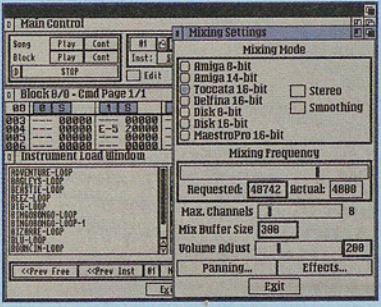
News reached us right as we went to press that a Delfina 1200-specific version of *Samplitude Opus* is going to be forthcoming.

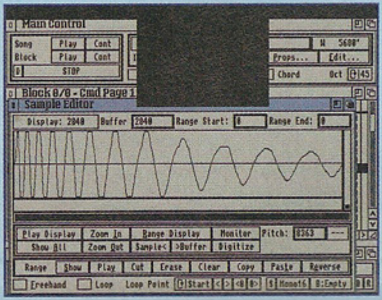






Even though Delfina 1200 can generate its own real-time effects, you'll still find that you need the services of a dedicated sample editor, such as *SoundProbe*.


The direct Delfina output mode from *SoundStudio* doesn't work with the 1200 version of the hardware, but the Toccata emulation comes to the rescue again.


Unfortunately, there's no third-party software support for the DSP features of Delfina 1200 at the moment.

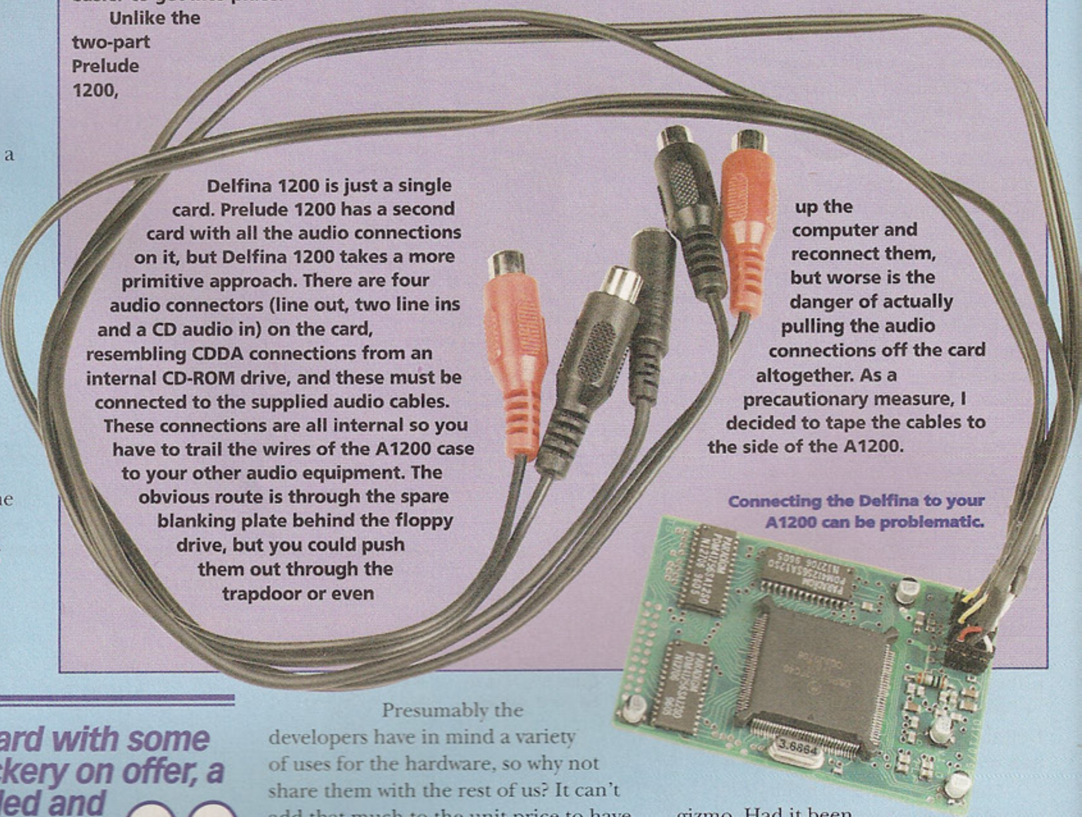
While I'm on the subject, a comprehensive trouble-shooting guide should have been included. You can't expect to round up all these disparate bits of software and expect them all to work without a hitch, but then neither should it be up to the user to spend time trying to figure out which of the applications, libraries, drivers and handlers are clashing with each other.

And to think how we Amiga users loved to gloat over PC *IRQ* conflicts problems… what goes around comes around, I guess.

HARDWARE INSTALLATION

It's not until you see how small these cards are that you realise how unnecessarily large Zorro cards are (that's 14 year old computer standards for you, I guess). There's precious little space inside an A1200 as it is, and like its rivals, Delfina 1200 has to squeeze into the small area around the clock port on the motherboard. It's slightly smaller than the digital part of the Prelude and this makes it a lot easier to get into place.

Unlike the two-part Prelude 1200, Delfina 1200 is just a single card. Prelude 1200 has a second card with all the audio connections on it, but Delfina 1200 takes a more primitive approach. There are four audio connectors (line out, two line ins and a CD audio in) on the card, resembling CDDA connections from an internal CD-ROM drive, and these must be connected to the supplied audio cables. These connections are all internal so you have to trail the wires of the A1200 case to your other audio equipment. The obvious route is through the spare blanking plate behind the floppy drive, but you could push them out through the trapdoor or even drill a few holes in the case if you needed to. I'm not impressed with this method, mainly because the audio cables are left hanging off the fragile jumper-style headers on the card and could easily be yanked off by accident when connecting up to other devices or even just when moving things around on your desk. Disconnecting the cables would be annoying enough as you'd have to open up the computer and reconnect them, but worse is the danger of actually pulling the audio connections off the card altogether. As a precautionary measure, I decided to tape the cables to the side of the A1200.



Connecting the Delfina to your A1200 can be problematic.

SOUND QUALITY

As for the hardware performance, it's a bit disappointing. With your Paula output routed through the card, the DSP seems to accentuate any noise that's already there, though to be fair it could just be the higher rated output of the card making it seem that way. Even with nothing connected to the inputs, my card still emitted a very high pitched whine. Maybe this was interference from the internal hard disk that sits right next to the card.

The manual suggests you cover the card with a metal shield before use. Unfortunately, the bit of RF shielding that has to be removed from over the clock port doesn't fit back on again once the card is in place and no alternative shielding is provided.

> **…it's a nice card with some handy DSP trickery on offer, a bit messy when installed and subject to some noise.**

I had no such problems with the Prelude 1200, which uses a separate card for audio ins and outs, insulated by a ferrite band on the connecting cable.

There are some things for which you might find Delfina 1200 particularly useful. For example, the *DelFX* program can be used as a basic sampler by routing the output to disk. You can pass the input through the DSP, so that means you can record samples with effects on them. This in turn means that a *SoundStudio* user could sample different parts of a song and add different effects to them accordingly, before putting them all together again in *SoundStudio*.

I know it's par for the course these days, but the eight page 'manual' is totally inadequate. You do get some docs on the disks, but these only go so far into explaining what could be done. Presumably the developers have in mind a variety of uses for the hardware, so why not share them with the rest of us? It can't add that much to the unit price to have a decent-sized printed manual, complete with suggestions for use and detailed descriptions of the hardware and software, not to mention the odd mini-tutorial. The attitude of "it's a sound card, figure it out yourself" just isn't good enough.

CONCLUSION

When reviewing a piece of hardware, there's always the question of how much you take into account the level of software support it has. If Delfina 1200 matched Prelude 1200 on that front I'd say it would be a toss up between the two as to which was the better buy; Delfina's DSP versus Prelude's superior interfacing and sound quality.

However, without a strong software base, Delfina 1200 will never fulfill its potential and that's the main reason it's got a lower score. I'd like to think that there are all kinds of software tie-ins in the pipeline, but seeing as so little has appeared so far, I'm not particularly confident of that.

So it's a nice card with some handy DSP trickery on offer, a bit messy when installed and subject to some noise. It's flawed, but despite all my moaning and whining it's still quite a good little gizmo. Had it been the first clock port sound card I'd seen it probably would have made a better impression, but with two others out there vying for your greenbacks, it's got some stiff competition.

DEVELOPER: Petsoff Limited Partnership (Finland).
http://www.sci.fi/~petsoff
Fax: +358 5 4515223.
SUPPLIER: No UK supplier as yet.
PRICE: E310 (roughly £210) or E255 outside the EU.

Pros and Cons

- \+ Real-time DSP effects.
- \+ Works with a standard A1200.
- − A bit noisy.
- − Lacks software support.

OVERALL VERDICT:
A good sound card that needs more software support.

80%

Apollo Accelerators

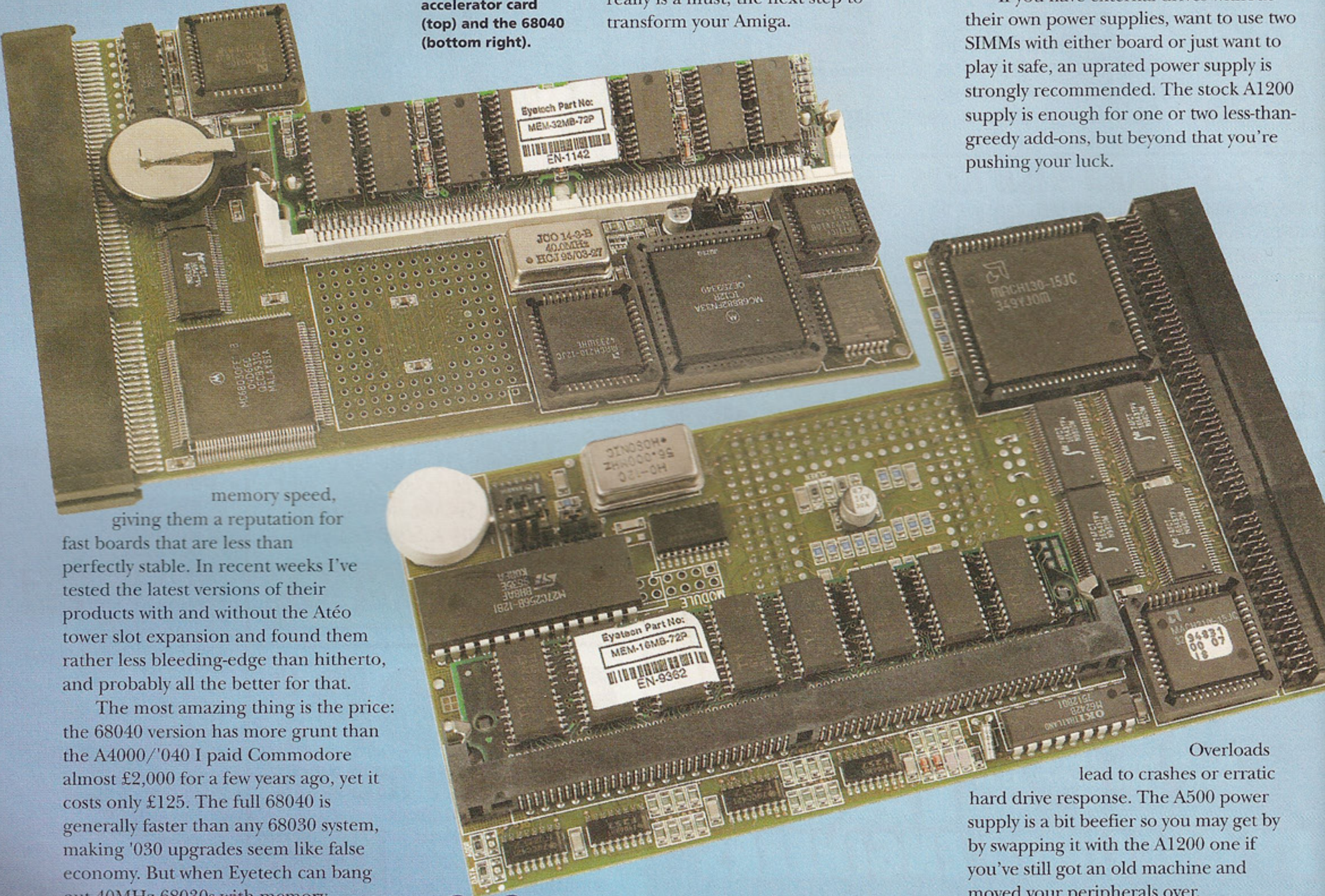
Simon Goodwin exhaustively tests the latest A1200 budget 68030 and 68040 accelerators from ***Apollo***, via ***Eyetech***.

The German Apollo brand is one of the most conspicuous on the A1200 expansion scheme. Its main rivals are California-based GVP MTEC, who make many of the boards sold by Power Computing, and phase 5 at the high end of the market. Apollo have an aggressive approach to CPU and memory speed, giving them a reputation for fast boards that are less than perfectly stable. In recent weeks I've tested the latest versions of their products with and without the Atéo tower slot expansion and found them rather less bleeding-edge than hitherto, and probably all the better for that.

The most amazing thing is the price: the 68040 version has more grunt than the A4000/'040 I paid Commodore almost £2,000 for a few years ago, yet it costs only £125. The full 68040 is generally faster than any 68030 system, making '030 upgrades seem like false economy. But when Eyetech can bang out 40MHz 68030s with memory management and floating point co-processors at £60, comfortably quadrupling the stock A1200's performance, there may well be life in the 68030 yet…

In fact, both products have their strong points. As we shall see, there's a lot more difference between a 68030 and a 68040 than adding a 10 and messing with the megahertz. The only mystery is why we've still got thousands of readers with unexpanded A1200s!

Once you've fitted a hard drive, the only significant expansion that costs less than one of these boards, acceleration really is a must; the next step to transform your Amiga.



The 68030 accelerator card (top) and the 68040 (bottom right).

> **If you're strapped for cash, these boards offer a lot of the power for a fraction of the price of a top-notch Amiga.**

POWER LIMITS

These aren't top-speed designs and don't push the limits of the A1200 power supply or heat flow so you should be able to use them with a standard power unit in non-tropical desktop machines. The 68040 is the hungriest and may drain more of the 5V supply than is safe for reliable operation if your internal hard drive relies solely on that supply. Most 3.5" hard drives split their load between 12V and 5V rails, so they're a lot less likely to be a problem.

If you have external drives without their own power supplies, want to use two SIMMs with either board or just want to play it safe, an uprated power supply is strongly recommended. The stock A1200 supply is enough for one or two less-than-greedy add-ons, but beyond that you're pushing your luck.

Overloads lead to crashes or erratic hard drive response. The A500 power supply is a bit beefier so you may get by by swapping it with the A1200 one if you've still got an old machine and moved your peripherals over.

MEMORY SPEED

The Apollo accelerators were each supplied with one socket for a 72-pin SIMM memory expansion board. Some sort of expansion is vital, even if it's just a 1Mb SIMM, worth around a quid; programs using it will run many times faster than those limited to chip RAM, where the custom chips get four times as much memory access time as the processor, whatever its markings.

You must budget for some fast memory and at least 8Mb for serious multitasking or graphics.

Fast memory doubles the speed of the stock A1200's 14MHz 68020 and is yet more essential to realise the potential speed of faster processors. These boards put the SIMMs on the same trapdoor card as the fast processor, giving it direct access, uncontended by motherboard activity. They also extend the address range of the A1200 from 24 bits – the same 16Mb space as the original 16-bit Amiga, with room for no more than 8Mb of fast RAM – to full 32-bit addressing, offering a theoretical 4Gb of space and no PCMCIA clash.

In practice, these boards support up to 32Mb in each SIMM, plus hardware memory management so you can extend memory to the limits of your hard drive in rare cases when sheer address range is more important than speed. Both units have provision for a second SIMM socket which Eyetech can add for an extra £20, either at the time of purchase or later.

The sockets support 32-bit SIMMs and 36-bit IBM ones, with redundant parity check bits in capacities from 1Mb to 32Mb each (1, 2, 4, 8, 16 and 32). Look for parts with a nominal speed rating of 70nS or lower – 60nS parts are faster, and common now, but bear in mind that this rating measures only one dimension of the memory speed.

VARIATIONS

The boards were designed for Fast Page Memory but should work with cheaper EDO PC SIMMS, like those now shipped by Eyetech: a 32Mb SIMM on the '030 and a 16Mb single-sided one for the '040. You'd be wise to get a swap-back agreement with your supplier in case of timing or mechanical problems. The single-sided 16Mb SIMM worked in both, but the raised pins of the 68040 on the other side of the board meant the double-sided 32Mb one wouldn't quite latch into the Turbo 1240 SIMM socket. Caveat emptor.

Both review boards are somewhat overclocked, using processors rated by Motorola at a lower speed, but the boost is relatively slight and shouldn't cause problems; they don't run the processors at anything like the maximum possible speed for premium-priced chips.

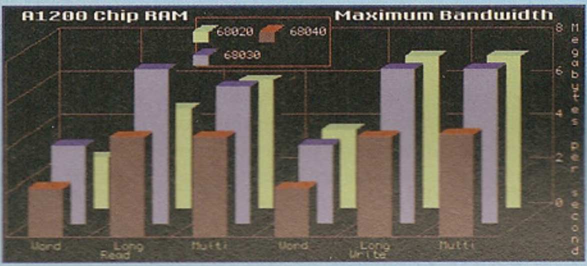
These boards should work with all issues of the A1200 motherboard but further-expanded systems could fall over because of subtle production faults. Eyetech have a detailed understanding of these flaws, which stem from the non-arrival of a chip set revision intended to remove the need for patches on the board. If necessary they can add the missing bits to tame the Gayle and Budgie chips on Escom revision 1D4 and 2B motherboards for £30 plus carriage. This makes them as stable as Commodore's 1D1 revision, most common in the UK.

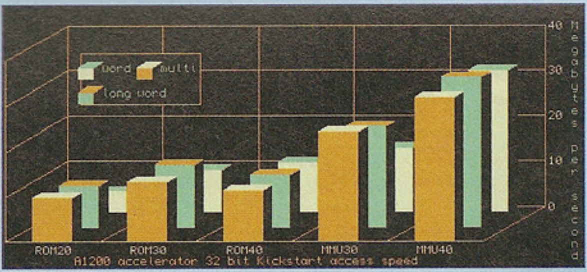
32-BIT SIMM RAM SPEEDS COMPARED BY BUSTEST

SYSTEM	READ word	READ long	READ multi	WRITE word	WRITE long	WRITE multi
Access						
Apollo A1230/40						
Standard	14.2	22.3	24.6	15.6	31.1	34.9
Std + Burst	16.4	27.4	21.9	15.6	31.1	34.5
Std + MMU	13.7	21.6	23.9	15.3	30.1	33.6
Apollo A1240/28						
Burst + MMU	34.2	38.1	35.4	22.4	23.0	22.6
Commodore A4000/'040						
Burst + MMU	12.7	13.0	13.0	7.0	6.9	7.0
CyberStorm 1 68060/50						
Burst + MMU	42.3	54.4	54.6	35.2	37.2	35.5

Burst mode speeds up 68030 reads. The MMU slows 68030s down slightly. The 68040 and 68060 (with the same SIMMs, for comparison) always use burst and memory management. Test program: *util/mon/bustest.lha* by Michael Van Elst.

Conversions to asynchronous CPU cycles hamper 68040 transfers to and from chip memory.





Remapping Kickstart with the MMU helps the 68040 dramatically, and helps the 68030 substantially too.

APOLLO '040/28

The 68040 board uses a nominal 25MHz processor clocked at 28MHz. In fact, the socketed crystal ticks 56 million times per second as all 68040s are 'clock doubled' in Intel terms, but this is normal and means the processor core runs a little faster than the chip in a stock A4000/'040. SysInfo rates it at a bit over 20 MIPS (Meaningless Instructions Per Second), which is around 30 times faster than a 68000-based Amiga.

This is ample speed for web browsing, JPEG decoding, vector fonts and most games. You don't need more speed unless you're heavily into real-time signal processing or 3D rendering, and even then you're likely to find that other aspects of the system hold you back more than the raw CPU power.

33MHz and 40MHz versions are also available, but these are the hottest 68K chips available and push the limits of the A1200 and SIMM memory. An all-CMOS 68060 runs substantially cooler, despite greater speed, but you pay through the nose for its design refinement. This model has a fan on the back of the processor which makes fitting a tight squeeze, but it's vital to reliable operation in the A1200 trapdoor slot. You need a tower if you want to use two SIMMs with the A1240 as there's just not enough room in a desktop A1200.

The 68040 caches are much larger and faster than those on earlier processors, substantially boosting speed. Without caches, an A4000/'040 is slower than the A4000/'030, but with them on it jumps ahead by a factor of three, despite a slower memory interface. The problem on the A1200 is that a lot of games written specifically for the 68020 just about work on the 68030 but fall over on 68040s.

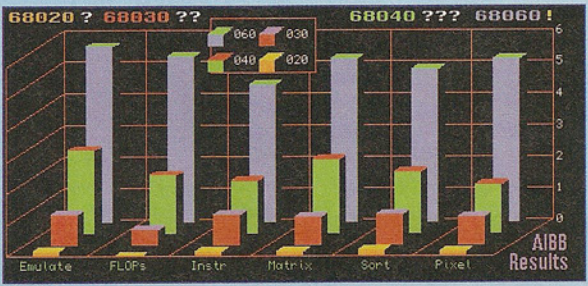
Naive coders trying to wring the ultimate performance out of the stock A1200 use self-modifying code that gets caught up on later 68040s or 68060s because the caches are so much larger and copyback optimisations delay costly writes. This is the price of progress: the faster your machine, the more likely it is that you'll have to slug your system with commands like CPU NOCACHE or switch to better-written software.

APOLLO '030/40

The 68030 board is clocked at 40MHz, making it about half the speed of the 68040 on computationally-intensive tasks. As anyone who's waited for a

Continued overleaf ➡

Either Apollo board boasts five to 50 times more raw power than the stock A1200, but they're little threat to the 68060.



400MHz Pentium will attest, raw MHz are little indication of the true speed of an entire system. I'll compare these in more detail later, but bear in mind that real performance varies depending on your application and benchmarks are only generalisations, however carefully chosen.

My tests measure four key dimensions of performance: instruction throughput, floating point maths, local fast memory and the interface to the Amiga motherboard. Real programs test all these in varying proportions and a budget design can't push them all to the optimum. Trade-offs are necessary and may be significant.

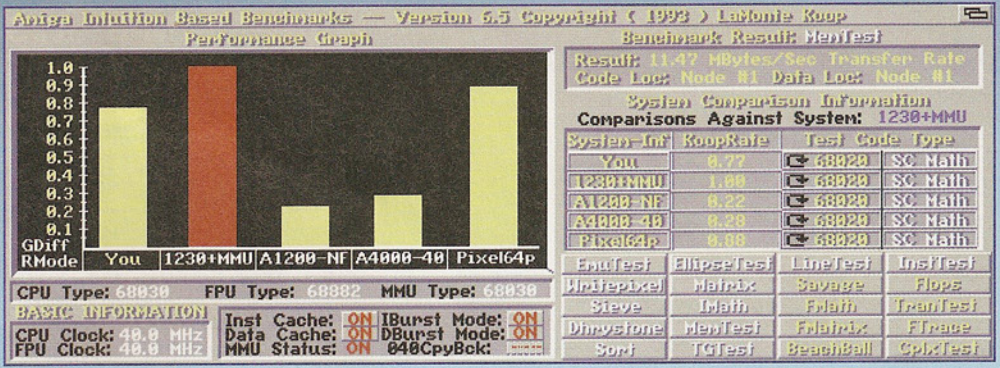
The Mark 3 Apollo 1230 board has provision for a PGA chip as Motorola only supply the fastest 68030s in that up-market gold-pinned package, but the review 68882 was a socketed FPGA part with the CPU in a low-profile surface-mounted CQFP package. They're nominally rated at 33MHz, inexpertly scrubbed off the 68030, but should in practice work fine at 40MHz. If you have any problems, the UK Sale of Goods Act protects you – this is sold as a 40MHz accelerator.

> **These aren't top-speed designs and don't push the limits of the A1200 power supply or heat flow…**

You push it further at your own risk. The 33MHz rating is clearly marked on the FPU but I've never seen a 68882 that wouldn't work reliably at 50MHz, whatever the marked speed. There's only one soldered down clock oscillator driving both chips, and the 40MHz speed seems a sensible choice. The main processor in a 50MHz 68030 accelerator gets seriously hot and elbows SIMMs towards their speed limit.

The CPU DATABURST command speeds up the '030 on *BusTest*, which uses separate reads and writes, but *AIBB*'s cyclic memory test favours the default, with 128-bit burst reads disabled in favour of sequential 32-bit accesses. Some accelerators adjure the '030 burst mode, but Apollo give you the choice. Results vary, so suck it and see.

Notice that this 68030 is as fast at accessing chip RAM as the original 68020, whereas the 68040 is about 50% slower, needing half as much time again for each transfer. This is because the 68030 uses exactly the same cycles as the 68020.



The 68030 burst transfer actually slows down *AIBB*'s interleaved read/write memory test, here compared with the same board with the default setting (no bursts), stock A1200/'020 and A4000/'040, plus the 28MHz Apollo 1240 (towered up, incidentally, with Atéo's Pixel64 graphics).

FASTER KICKSTART

Both systems benefit substantially if you copy Kickstart into fast memory with the MMU, using Commodore's *CPU FASTROM* (for 68030s) or my *QuickROM* (on Aminet) for later processors. The MMU was designed for *Unix*-style virtual memory, which is possible but a bit of a gratuitous hack on Amigas designed to work without it. More usefully, the Freeware *MuForce* and *Enforcer* can detect, prevent and report program errors with MMU magic; memory management can also speed up some emulators.

The 68040 and 68060 are optimised for bursts and inbuilt hardware memory management and this speeds up access to adjacent words in fast RAM but requires a line read to initialise the cache before each write can update it. Also, the differences in processor architecture require extra logic in order to convert to old-style '020 signals, resulting in a significant cost in price and performance.

The only way to get top' 040/'060 speed *and* fast access to the motherboard is to add queues and synchronisation logic on the accelerator. So far only phase 5 do this, which goes some way to explain the higher price of their boards.

CONCLUSIONS

These accelerators are pedigree products, mature upgrades that transform the A1200. You don't get any software but it isn't needed because all A1200s ship with the CPU command and 68040.library.

However, Thomas Richter's *mmu.library* (in Aminet's util/library drawer) could help you make best use of the MMUs, and the commercial *OXYpatcher* boosts 68040 transcendental FPU emulation.

A 68060 would be a lot faster but several times more expensive, with most of the difference down to Motorola. If you're serious about SCSI, get a board with a true DMA controller – this isn't an Apollo option. But if you're strapped for cash, these boards offer a lot of the power for a fraction of the price of a top-notch Amiga.

Apollo Turbo 1230 Mark 3

SPECS: 40MHz 68030, internal MMU and 68882 FPU.
SUPPLIER: Eyetech (01642) 713 185.
Fax: (01642) 713 634.
Email: sales@eyetech.co.uk.
PRICE: £59.99 with 1 SIMM socket, £69.95 with 2 SIMM sockets.

Pros and Cons

- \+ Good 68020 compatibility.
- \+ Fast motherboard access.
- \+ FPU transcendental hardware.
- − Unexceptional code speed.

OVERALL VERDICT:
A vast improvement for the stock A1200.

85%

Apollo 1240 Turbo

SPECS: 28MHz 68040, internal MMU and FPU.
SUPPLIER: Eyetech (01642) 713 185
Fax: (01642) 713 634.
Email: sales@eyetech.co.uk.
PRICE: £124.95 with 1 SIMM socket, £144.95 with 2 SIMM sockets.

Pros and Cons

- \+ Big, fast caches with copyback.
- \+ Excellent FP arithmetic speed.
- − FPU transcendental emulation.
- − Slower motherboard access.

OVERALL VERDICT:
Worth the extra for serious applications.

83%

Active Technologies'

Internet Pack 3

Reader Reviews

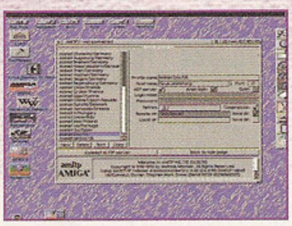
Stephen M. Dowe gets connected.

Connecting your Amiga to the world may seem expensive, over-rated or simply daunting, but the Internet pack reviewed here may well change that preconception. For under £110, it consists of a V.90 MagicXpress modem, the latest *NetConnect* and *STFax* software, plus the necessary cabling to connect the modem to a telephone socket and either your Amiga's standard serial port or to an add-on serial card such as the IOBlix. For a little extra investment, Active can supply a clock port serial card, but beware that your Amiga may not like it (see Bad Timing).

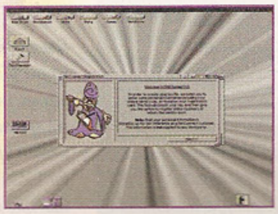
A full installation of *NetConnect* requires 12Mb of hard disk space, a little of which can be reclaimed if you have *MUI* and some media players like *CyberQT* and *aMiPEG* already installed on your system. It copied swiftly from the CD-ROM, partly due to its time-saving installation options, and *STFax* was correspondingly efficient.

Once installed, it's easy to add a button to the *NetConnect* dock bar which will start *STFax*. Indeed, *STFax* complements *NetConnect* by utilising the *Contact Manager*, the hub of *NetConnect*, which simplifies the management of your email addresses, bookmarks for *Voyager*, fax numbers and so on.

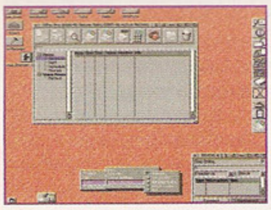
Before use, a few parameters need to be defined within the TCP/IP stack so your Amiga can talk to your Internet Service Provider (ISP). To do this, the installation process asks if you want help from the *Genesis Wizard*, which is recommended. It simplifies the configuration of connection protocols by taking the most rudimentary information from you before dialling-up the ISP's number and completing the task. However, I found that when adjusting *Genesis Prefs* further, the CD-ROM's inlay book contained directions to select the "Provider" option which, unfortunately, was not to be found. Consulting the HTML documentation through the newly-installed *Voyager* revealed that the features of this Provider option now seem to be contained within the "Interfaces" option instead.



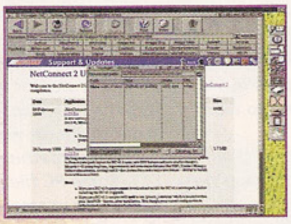
Like all NetConnect products, AmFTP's interface can be enhanced massively with MUI.



The cartoon-esque wizard (nicknamed Jamie) and his magic torch promise Internet adventure...



Through *AHI* you can even record all messages to a separate samples directory for later mickey-taking.



***Voyager* in action, downloading the 2.3 free upgrade to *NetConnect*. Groovy.**

Once completed, I was immediately able to log in to my ISP, register and surf away. The integration and usability of this software is impressive and immediately perceptible. When browsing the web with *Voyager*, for instance, Microdot appears every five minutes to check for email. You can browse new web pages while downloading and un-archiving software thanks to *X-Arc*, and this really illustrates the advantages of friendly software multitasking smoothly on capable hardware. In fact, hardware makes a lot of difference in this equation, and while a Super72, 64-colour AGA screen and '030 processor can just about cut it, I reinforce the "just". Give this software some '060 and graphics card muscle and you'll be rewarded with a smoother, faster and generally more pleasant experience.

The web is simply a technologically demanding communications medium. *Voyager* is a very capable browser in this respect, but occasionally it mangles pages a little by offsetting text which should be relevant to a margin or picture. From experience, though, I maintain that even an '030 set-up displays anim-GIFs on web pages more smoothly than a 150MHz Pentium. With *NetConnect*, however, you get more than a just browser and email/news facilities. *AmTerm* has a small, friendly interface, and within minutes I'd dialled-in to a BBS and was downloading a rave demo. Similarly, *AmFTP* allows an easy connection to Aminet (or any other FTP site) and permitted a more efficient file-transfer than from the web, due to its multiple file selection and lower system overheads. *STFax* is an impressively self-contained piece of software. Apart from sending and receiving faxes it can act as the front-end of your own BBS. Alternatively, it can be used for voice mail; recording telephone messages into relevant directories on your hard disk, to be replayed through a connected telephone handset, modem-connected headphones, *AHI* or even directly through Paula. If you plan to run a business using your Amiga, this software compendium is essential.

In use, it sustained an error-free connection of about 45Kbps every time, and this is with Freeserve, so it only costs 1p per minute at weekends.

I'd recommend this pack to any prospective net user. It's definitely more than the sum of its parts, and Active provide friendly and informative customer support to boot.

BEN'S VERDICT

Active's *NetConnect* bundles certainly offer great value for money. If you can afford it, I'd recommend going for the more expensive Pace 56K Voice modem as it's the only one which supports UK Caller ID, which is useful to have with *STFax*. It also gives you faster speed, but even the cheapest pack provides a great way to get online easily.

BAD TIMING

If you have an A1200 motherboard revision 1.d.4 or 2.b, beware that it may require attention before being used with a serial card connected to the clock port. Ridiculously, the clock port (located by the Kickstart ROMs) suffers timing problems (doh!) which manifest themselves in transmission errors when attempting to transfer data at a high speed. Fortunately, these problems can be resolved. Both Eyetech (01642) 713185 and Power Computing (01234) 851500 can advise about this, or, if possible, consult Eyetech's web page at: http://www.eyetech.co.uk/SUPPORT/S1200/AMIGAMOT.HTM for more details.

YOUR REVIEWS

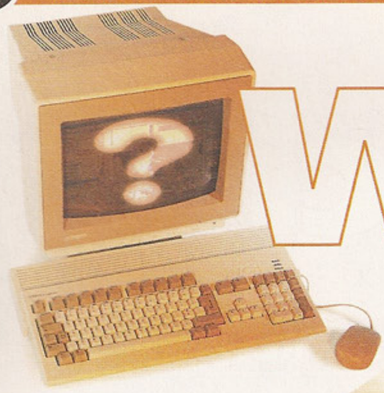
Have you got any software or hardware you couldn't live without? Got any that you'd happily chuck in the bin? Write a fair and accurate review of about 750 words and you could see your work appear in *AF*!

We will also need some good photographs of any hardware you review and a passport photo of you. Send your reviews to: *Amiga Format* • Reader Reviews • 30 Monmouth Street • Bath • Somerset • BA1 2BW.

SUPPLIED BY: Active Technologies (01325) 460116
http://www.active-net.co.uk/products/
PRICE: Starting from £79.95. This pack cost £109.95 (+£6 P&P)

OVERALL VERDICT: Great value, good HTML documentation and overall compatibility. Highly recommended.

92%



Workbench

Technical queries solved by John Kennedy. Email: amformat@futurenet.co.uk, putting Workbench in the subject line, or write to: **Workbench • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW.**

BLITZ BITS

I'm writing a fantasy football stats programme using *Blitz Basic 2* and I have two items that I need help with.

1 How do I load graphic images into a Window, i.e. "IFF" files?

2 What commands are used to send information to a printer? I know you've covered *Blitz* tutorials in the past but I can't recollect you covering this.

Graham Wylie
Tyne & Wear

1 You load the file into a bitmap, which you can then display. Here's an example:

```
Screen 0,3,"Test Screen"
ScreensBitMap 0,0 LoadBitMap
0,"testpicture.iff",0 Use Palette
0 MouseWait End
```

2 As Blitz was primarily created for games, printer support wasn't high on the list. You might find you have to re-direct your text to a file which is opened (with OpenFile*) pointing to the raw printer device. Yucky, I know, but it'll work for plain text.*



Are all external modems the same? Pretty much, yes.

PC SHARING

I have a friend who has a PC and has been kind enough to download some stuff from Aminet for me to use on my A1200 tower. My problem is this: I have *CrossDOS 6*, *Opus 4* and *GUI 4 Unzip* on my hard drive so I'm able to read a 720K PC floppy but I'm unable to unarchive some HD installers, etc, in the *LhA* or *LZX* format, plus any programs that need to be unzipped.

Secondly, could you tell me if it's possible to use a PC external modem on both an Amiga and a PC? Could you please help?

Robert Bentley
Bolton

I'm wondering when you say you're unable to unarchive these files, is that because you haven't used the right tools? For example, to unarchive a file compressed with LHA *you need a specific un-*LHA *program, the same as for* LZX *formats. You'll find many utilities like this (in uncompressed form) on Amigas, and on the* AF *cover CD. As long as your PC-owning friend downloads the files in a binary format which won't alter them (preferably using an FTP client, as some web browsers can mess them up), there's no reason why you won't be able to unpack them on your Amiga.*

Just remember that an unzip program is for unpacking zip files, and not necessary for all packed files.

DRIVE FAILURE

I have an A1200 with 8Mb of fast RAM and an A5000 PSU, to which I recently fitted a bigger IDE hard drive (IBM 330Mb), since which I've encountered a few problems.

Sometimes on cold starting I get the 'load Workbench disk' symbol, but it boots okay if warm rebooted. I've tried ensuring a good contact at the interface and HDD connectors, which for a little while seemed satisfactory, but the problem soon returned. I've named the boot partition HD0 but would it make a difference if it was renamed Workbench?

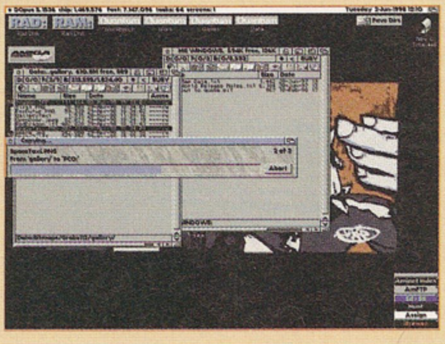
I have the *AF* DD coverdisk version of *Scala* on which the *Scala Player* has never worked so I've just run it from the main program. Since loading it onto the new HDD I can't get rid of the pointer when the program script is running, whether the pointer tick box is ticked or not. This is despite twice re-installing the program. How do I get rid of it? I've figured out most things on *Scala* but can you please tell me what 'net' does?

At work I use a PC. Sometimes, using *CrossDOS* and *Image Studio*, I convert and transfer bitmap files between it and the Amiga. Can you tell me if there are programs available to convert other PC files, such as .doc, .ppt, .xls, .wav, .avi, .wmf, .exe, etc. Also, are there any available that can zip and unzip Winzip files?

F. J. Hudson
Derby

The problem you describe with your hard drive is very common. Many Amiga users find they need to perform a warm reboot (ctrl/Amiga/Amiga) in other to get the hard drive to be recognised. Many reasons have been put forward for this, including the observation that it seems to happen more in cold weather! Whatever is going on, there seems to be a timing issue at the heart of it. There are a few things worth trying. Firstly, try (temporarily, if possible) breaking the Pin 1 connection on the IDE lead as this seems to work with some 2.5" IBM drives.

If you're using a Connor 3.5" IDE hard drive there's a jumper marked CAM/CAL, and swapping this can also make the drive boot first time. I'm not sure if playing with the MaxTransfer setting makes a difference, but it's worth a try. One thing is almost certain: renaming the hard drive won't make a blind bit of difference.



Although *CrossDOS* will allow you to copy PC files to your Amiga, you may have trouble loading them.

Your Scala problems have stumped me. There's clearly something amiss if the pointer won't vanish. It might be worth checking to see if you've selected any other video options from Workbench, or whether you've installed any screen mode promotion utilities, anything which might be causing the pointer sprite hardware to vanish. I've got the Scala MM300 manual, but can't find any reference to "Net" either. A way of linking Amiga's running Scala together perhaps? I know that Scala has been used to create video-wall solutions, and this may be something to do with it.

Some PC files can be converted and others can't. For example, a program such as SoundStudio can load WAV files. Some animation programs will cope with AVIs and there are certainly versions of Unzip around to unpack compressed files. However, most of the others are proprietary to particular packages and even on a PC there are problems with different versions. Although there are Amiga programs which could convert Microsoft Word or Excel files these may not work for files saved from the latest editions.

Instead, save the PC files in a traditional way – plain text for documents, CSV files for spreadsheets – and you should have more luck. An .exe file is a program so you can more or less rule that one out totally, and a PC emulator simply isn't practical. Chances are that the .exe is a Windows95/98 program, so that simply won't work on an Amiga, full stop.

Yes, there should be no problem using the modem. All external modems use standard RS232 serial ports so you can even use the same lead. Just plug it in and get online.

ALL QUIET..

I have an A1200 with Blizzard 1230 IV '030/50 with FPU, 16Mb, a 16x CD-ROM and 1.3Gb hard drive in a sidecar tower connected with an IDE cable and buffered interface. This set up is connected to my SVGA 15" PC monitor via a flicker fixer, scandoubler and switchbox. I also have an adaptor to connect my phono plugs to the powered speakers. I'd be pleased if you would answer two queries.

1 I have the mini ATAPI player mounted and while I'm able to activate audio CDs, eject them, skip and so on, I can't hear any output from the speakers. All other Amiga programs output faultlessly so what's wrong?

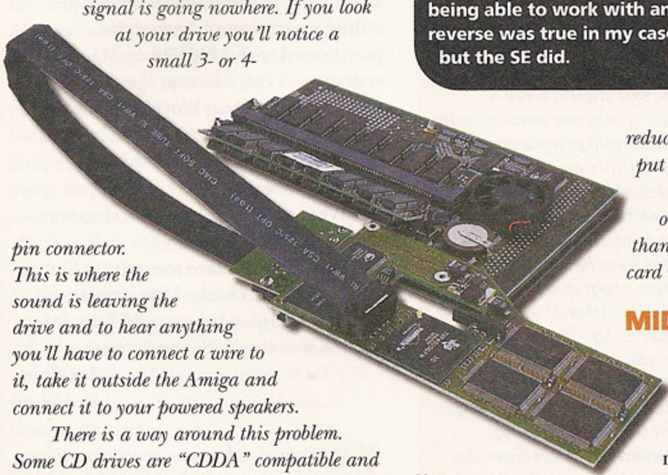
2 I have the VGA driver in monitors as well as several others and run Multiscan Productivity. However, on some programs there's severe 'bowing' at the left and right of the screen. Changing the screenmode to PAL interlaced or other settings doesn't cure the problem, nor does altering the monitor's settings. I have no problems with the PC. Any ideas?

David Thomson
via email

1 There's no physical connection between the CD drive's audio output and the Amiga's internal sound. While the CD drive is happily playing the songs, the audio signal is going nowhere. If you look at your drive you'll notice a small 3- or 4-pin connector. This is where the sound is leaving the drive and to hear anything you'll have to connect a wire to it, take it outside the Amiga and connect it to your powered speakers.

There is a way around this problem. Some CD drives are "CDDA" compatible and can actually pass the digital sound information down the data cable into the Amiga. Some Amiga CD players can then take this sound and pass it through the standard Amiga sound hardware, and so the sound appears at the back of the Amiga, ready to enter your speakers. This will only work if your drive is CDDA compatible and you're using suitable player software.

2 I'm afraid the screen distortion is quite common when using the Amiga with PC monitors. The Amiga's video output just isn't 100% compatible with VGA monitors and differences in timing inevitably result in some problems. On my own system, I had to reduce the horizontal width of the screen and put up with black borders about an inch wide on either side of the screen. The only true solution is a graphics card, and thankfully an A1200 compatible graphics card is now available.



Now even A1200 owners can have a graphics card!

Feedback

I don't know if this will be any help to Sam Byford from Benfleet (*AF121*) about his noisy fan on the Apollo 1240. I have a 1240 too and yes, it had a very noisy fan as well. It seems to be common. Anyway, I put up with it for as long as I could but eventually it failed altogether. I have my A1200 in an Infinitiv tower, but even so the space restriction is still tight. I went out to the local computer shop for another fan. At first sight it looked way too big, but only in length and width, which was about the same size as the '040 itself. Once you unscrew the fan from the heat sink it's the same size in height as the Apollo one though, and so it fitted in nicely and is very quiet too.

David
via email

Some people like to keep their Amiga's cool, while others (see More Boot Problems) need to keep them warm. Only the Amiga...

With regard to Chris Goffin's Power Problem (*AF121*), the problem Chris described sounds very familiar to me: it sounds like the same one that I experienced when upgrading to PPC. After a lot of testing, I found the culprit to be the buffered IDE interface that I'd bought from Eyetech. I was experiencing things like none of the IDE devices being recognised on bootup and games locking up. All my games now work just as well on my PPC card as they did on my old 1260 card.

I had been using the latest EZCD-Mk4 interface. To cut a long story short, I got a new interface from Power Computing and this solved all my problems. This turned out to be the same as the cheaper EZCD-SE interface which Eyetech advertise as not being able to work with an '060. However, the reverse was true in my case – the Mk4 didn't work but the SE did.

You'll just have to trust me on this – it may sound silly, but believe me, I've looked into this problem comprehensively. I also know at least two other people who had the same problem and, after dumping their Eyetech buffered IDE interface, everything worked just fine.

From the system specs, it sounds like Chris has also got one of these interfaces. I'd either suggest getting a new interface from Power Computing, or contacting me as I have a spare, virtually unused buffered IDE interface identical to the one I'm using in my A1200T which I'm willing to sell for a very reasonable price.

Oliver Roberts
Norwich

In reply to Chris Goffin's letter, I have a few suggestions which might help. I expect he's using the Zip drive via the SCSI connector on his PPC. Take a look on the phase 5 website and see what you can find, or try contacting the company which supplied your PPC. They should be able to give you the necessary drivers. As for *Worms DC*, just press both of the "2" keys on your keyboard when booting up to disable the accelerator.

Stuart Walker

The letter I'm referring to is "Power Problem". Chris Goffin has the same accelerator as me, the Blizzard PPC603+/240MHz '060, and is having a problem with *Worms DC* crashing if a worm falls into the water. I had this exact same problem.

All he has to do is disable the CPU caches by typing CPU NOCACHE NOBURST before running *Worms DC* and the problem no longer occurs. You suggested disabling as much of the PPC as possible but this isn't necessary; only the CPU caches need to be disabled.

Stephen White

Thanks to you all, on Chris' behalf, for taking the trouble to write in with some excellent suggestions. If he can't get his system working properly after working through that lot, I don't know what will help him.

MIDI CONNECTIONS

I was thinking of buying a BoXeR or a PCI Amiga, but since I use my Amiga mostly for music I have to know if I'll be able to use my MIDI programs with it. I know that my Amiga MIDI interface probably won't work since it takes its power from the serial port. A normal PC serial port is different and can't power the MIDI interface.

If the Amiga MIDI interface doesn't work, will I be able to use a PC MIDI interface instead? Could I use my Yamaha MU80 as a MIDI interface since it has a host input for a PC computer?

Andreas Chatzakis
via email

It's not only the power requirements which makes the Amiga's use of the serial port for MIDI interfaces the connector of choice, it's also the support for the high speeds which MIDI uses. The PC uses a fairly basic UART in its serial hardware which just isn't flexible enough to be pressed into use as a MIDI port.

A PC MIDI interface is commonly part of the sound card; the joystick port doubles up as a MIDI interface when used with a special cable. There are a few parallel port MIDI interfaces, mostly for notebook computers, but these take advantage of the flexibility of the PC's printer port and it's very unlikely that they'd work on an Amiga.

The reason why, as always, is software. The physical connection is only half the story as it's the lack of driver software which is the main problem. As you say, a lot of MIDI gear is appearing with a "Host" mode, which is a simple RS232 connection. In theory this means the MIDI hardware would simply connect to the serial port of an Amiga. However, unless software is written to take full advantage of this, it may not work as expected. I believe that this Host serial port technique will work without special software on a standard Amiga, and so it should work

Continued overleaf ➡

on any new Amiga compatible device. Personally I feel that the serial and parallel ports have had their day, and any new Amiga device should have a USB port. Of course, that leads us back to getting drivers written for each new item of hardware...

FLOPPY PURPLE

I have what is probably a fairly common problem. I have an absolutely standard A1200 but I decided to try to upgrade it a little. It came with an ancient Praretek 20Mb hard drive and I was given a 6x ATAPI CD-ROM for Christmas. It came from Power Computing with a 4-way buffered interface and *IDEfix 97*. I took the top off the A1200 and connected just the interface and nothing else, as they advised me to do in their manual.

The computer booted onto the screen with the purple animation of the floppy disk. I then connected the CD-ROM to the interface and it booted instantly to the purple floppy screen, without the usual pause.

When I connect the hard drive, however, it makes noises a little, pauses and then stops, rather than testing the floppy drive and then continuing its boot sequence.

As it's an ATAPI device I can't use it without *IDEfix* and I can't use that without a hard drive. I phoned Power, who tested the interface to make sure it wasn't faulty. They assured me it was in perfect working order and advised that it was probably the HD being a slow spin and that I should get a new one.

I was reading a back issue of *AF* when I noticed a clause: "You don't need a hard drive to use a CD-ROM drive..." Is this true, and if it is, how? If it isn't, is there a cheaper option than buying a new hard drive?

Leo Hancock
Castle Cary

It sounds like the hard drive isn't enjoying sharing the IDE interface. Does it work when you connect it by itself to the board? If not, you've confirmed it. A 20Mb hard drive is only just better than nothing and a larger one would really be a good idea.

If the hard drive only fails to work when the CD-ROM drive is connected, make triple sure you've set any jumpers properly. Do you need to make one drive master and one slave? Or are both masters using different channels on the IDE interface? These are the things you'll have to check.

The reason I would say you don't need a hard drive is because you create a floppy disk to boot from which will let you use the CD-ROM but an HD is the real solution. Don't forget to perform a warm reset after you power up to see if the hard drive is a slow starter and needs more time to get into gear.

GETTING HARDER

I own an A1200 with an internal 2.1Gb hard drive and a Viper Mk IV upgrade ('030 processor and 4Mb fast RAM) and I'd appreciate your advice on the following points.

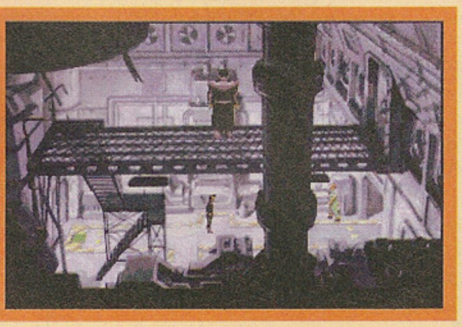
1 I don't want to sound daft but I'd never used a hard drive until I purchased one for my A1200 a few months ago. Since then I've noticed that with PCs the user has to wait to be told that it's now safe to turn off the computer before switching off. Am I supposed to be doing anything similar with my Amiga hard drive?

2 I'm experiencing problems with some of my games. With *Worms*, the program displays the message 'better have disk one again' after a few seconds of loading from my hard drive. I've tried everything I can think of (including the obvious task of inserting disk one again) but nothing seems to let me get beyond this point and I have to resort to playing the game from floppies. Do you have any suggestions?

3 Similarly, *Beneath a Steel Sky* is finally getting a chance to be played after all this time, but seems to have an obsession with crashing whenever I move my character to another screen (the graphics go all fuzzy, though I can still move the pointer). I've tried removing and re-installing both of these games but with no change in the results. Am I doing anything wrong or have I missed a step somewhere?

4 Finally, I have a few rogue drawers on my hard drive that I'm eager to get rid of but can't. When I try, I get the message "Error while removing 'name:' (222) object is protected from deletion". How can I remove this protection and get rid of these unwanted files?

Mark Harrison
Sutton-in-Ashfield



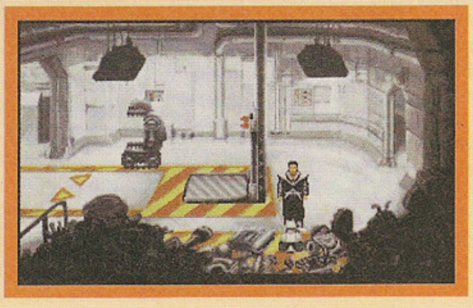
Beneath a Steel Sky has wonderful, crisp graphics. They shouldn't look fuzzy, oh no.

1 PC owners generally need to be told exactly what to do, but us Amiga people can usually get by with common sense. As long as your Amiga isn't actively writing to or reading from the hard drive you can pop it off at any time. Wait for the disk activity light to go off and then hit the switch. You don't need to close all your applications, although it's generally a good idea to do so in case they've kept a file open. Probably the only exception is if you're using a virtual memory system, in which case you should make sure you've disabled it before you power down.

2 Have you installed the software specifically to hard drive or merely copied the files from floppy to a new folder? If you've just dragged the files, the software could still be under the impression that it's running from a floppy and will look to the floppy drive when it needs more data. You may need to set-up some ASSIGN statements to make sure that when the software looks for data it looks to the folder you copied the data to.

3 I know* Beneath a Steel Sky *should have a proper installer because it was me who actually wrote it. Yes, my first professional programming job was to fix the installer for this game, and in payment I got some PC software. Something wrong there, surely? Anyway, make sure you use the installer – it's slow but it works. If you have, you could have the dreaded MaxTransfer problem which can occasionally cause programs to crash (usually games, usually* Monkey Island*) when reading data from a hard drive. Use the HDToolBox to reduce the MaxTransfer value associated with each partition on your hard disk.

4 If the files are protected you'll have to change the flags which control this kind of thing. Select the file and then pick Information from the Icon menu. You'll see a new window and a list of flags (check boxes) in the top right. Make sure "Deletable" is turned on.



ALIEN PARTITIONS

I have a few questions I'd like to ask concerning partitioning and formatting a hard drive with another type of file system, such as DOS or Mac.

1 Over the years, I've used or tried to get programs like *PC Task* working (I eventually got this up and running but very slowly and even to the extent of configuring the CD-ROM drive correctly), plus *ShapeShifter*, and only ever with a Hardfile on *PC Task*.

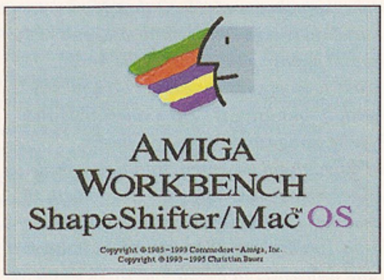
Try as I might, I don't seem to be able to get Workbench to recognise either a partition or hard drive partitioned with MS-DOS or Mac file systems so I can't format them because no icon appears on Workbench. Can you help me and, I'm certain, a lot of other Amiga owners with this very spooky problem?

2 What model of Mac is best to use ROM images from?

3 Do I have to have something like *CrossDOS* to make Mac emulation work and, if so, where would I get it as *CrossDOS* comes with the Amiga?

Les Crons
St. Helens

1 At one level, when you create a partition for these alien file systems, the last thing you want to do is let AmigaDOS near them. AmigaDOS will take one look at the Mac



Getting a Mac on your Amiga isn't too hard.

MORE BOOT PROBLEMS

I hope you can help me with my problem as it's driving me nuts. The problem is this: I've recently upgraded my accelerator to 32Mb of RAM, having previously had 8Mb, and now my Amiga refuses to boot from cold for anything between 10 to 15 minutes.

The symptoms are that I turn my Amiga on and there's a flash from the hard drive light. It resets, I don't touch anything and it then starts to boot up again. This time the hard drive light stays on for a little bit longer before it resets again. This goes on and on, going further into the startup sequence until finally my Workbench appears. During every reset I get the dreaded GURU error 8000 000B Task: 16009FE0. I did think it was a fault with the RAM so I sent it back to Power Computing, but the replacement they sent me back behaves in exactly the same way.

If I put my 8Mb of RAM back into the accelerator and boot from cold it works perfectly. Also, if I run my Amiga with the 8Mb in for some time and replace it with the 32Mb while the accelerator is still warm it boots faultlessly.

It seems to me that the accelerator needs to be warmed up before it can cope with the 32Mb of RAM. If this is so, how can it be when it works with my 8Mb?

D. Downing
Great Yarmouth

Cor, what is it with winter and Amiga's refusing to boot? Is it because they were all designed in some American state where the sun shines all the time? Yes, it does indeed seem as though your accelerator needs to be warmed up, which is just too weird. I notice you have a few other peripherals hanging off your Amiga so it's possible that this is a power thing and you'll need a beefier PSU unit. Otherwise, try the suggestions in the previous boot problem letter.

formatted partition and decide that it's corrupted and then do its best to nuke it. However, ShapeShifter *can mount one of its partitions as a drive called MAC: which I could then read and write to from the Amiga side while* Shapeshifter *is running. It's an easy way to get data such as images onto the Mac side of the system. It should work fine with a real hard drive partition, or a hardfile, although be aware that the hardfile method is slower. If you read up on the documentation that comes with* ShapeShifter *you should find something on using the Mountlist or a DosDriver with your particular system.*

2 One of the older ones, before all the PowerPC business came long. I use an LCIII which works very well.

3 Do you mean is there a program to read Mac formatted disks? Yes, there was: it was a commercial program called MacDOS. *I have no idea if it's still available now though, I'm afraid.*

MISSING DRIVE

My son has an A1200 into which we've installed a Western Digital Caviar 2540 3.5" IDE hard drive (540Mb). The hard drive powers up okay but when we try to prep it, using 'first install', an error message comes up saying "SCSI device not found" and we're unable to proceed. Why is this and what should we do about it?

C. R. Fulford
W. Bridgford

Although the SCSI part of the message is confusing, you can ignore it. For a reason lost in the mists of time, the Amiga's internal IDE interface appears to the Amiga as a SCSI interface. Daft, I know, but there you have it. The error effectively means that the software, and therefore the Amiga, can't see the hard drive. There are four possible reasons for this:
1. The hard drive is faulty or configured in the wrong way.
2. The Amiga's IDE interface is faulty.
3. The cable between the two is faulty or connected the wrong way.
4. The software has been configured in the wrong way.

Taking the drive first, make sure that its jumpers are set up so that the drive is a Master with no Slave drive present. IDE hard drives can be Master or Slave devices so you can fit two to each IDE port. If you set up a drive as a Slave and no Master is present, the Amiga just won't see it.

It's possible that the software is looking at the wrong interface. Make sure it's looking at scsi.device and not something more esoteric. Try other hard drive prepping software: if you can find HDToolbox *(our CD has* HDInstTools*) somewhere, use that.*

LOCK AND ROLL

I've just bought an Amiga 1200 with a hard drive, CD-ROM and a blizzard 1230 with 16Mb of memory. I have three questions for you.

1 I'm now using my PC for the Internet but I want to use my Amiga. The problem is that on my PC I have a program named *Telcost* which keeps a tag on my phone bill but I don't have such a program on my Amiga. Is there one?

2 I'm using my PC monitor for display with a scandoubler. Every time I switch on the Amiga the display is moving. After a while the display becomes normal, but why is this happening? It's a Microtek scandoubler.

3 My machine is second-hand and always boots from hard disk so I don't know which Kickstart ROM is present. Is there a way to find out without opening up the Amiga? I've looked on the Workbench but it gave me a version number I didn't understand.

Eric Nelissen
via email

1 There are quite a few on Aminet, including PhoneInfo, Online Meter, MUI Phone Dialer *and* DialTimer. *Have a look in the Comm/Misc part of Aminet.*

2 The Amiga may roll a few times until the monitor locks on to the display frequency. This is because the monitor is expecting a true PC video signal and the Amiga one is probably a tiny fraction outside those specs. The monitor eventually locks on to it, but not until it's rolled a few times. Try adjusting the Vertical Sync if your monitor allows it.

3 Hold down both mouse buttons after switching the Amiga on. You can then select several options, including temporarily disabling the hard drive. With no hard drive, the Amiga won't boot and you'll see the purple Amiga Kickstart screen. From there you can see which ROM is present. AF

IF YOU HAVE A QUERY...

At *Amiga Format* we aim to answer as many questions as possible. Unlike some magazines, we don't just concentrate on our areas of expertise – we take on all your problems (as long as an Amiga is involved).



John Kennedy.

Also:
- Be concise.
- Do your best to detail the problem.
- Describe the events that caused it.
- Give full details of your equipment.
- Make sure your question is relevant and wouldn't be more easily solved by contacting the dealer from whom you bought the goods.

Fill in, photocopy or copy the form below as best you can. Unfortunately we cannot reply personally.

You can email your queries to amformat@futurenet.co.uk, putting "Workbench" in the subject line.

Send your letters to Workbench, *Amiga Format*, 30 Monmouth Street, Bath, Avon BA1 2BW.

Your Amiga:

○ A500 ○ A500 Plus ○ A600
○ A1000 ○ A1200 ○ A1500
○ A2000 ○ A3000 ○ A4000

Kickstart version

○ 1.2 ○ 1.3 ○ 2.x ○ 3.x

Hard Disk: .... Mb

Manufacturer: ....

Extra RAM fitted – type, size, (Mb) and manufacturer:

....

....

Details of other hardware:

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Dave Cusick presents a beginners' guide to FTP – File Transfer Protocol.

The number of emails I've received in recent weeks has shown that scores of you have seized the opportunity presented by the emergence of free Internet Service Providers to finally make the jump onto the Internet. If you're one of these new netizens, we wish you a hearty welcome to the online Amiga community.

> "...there isn't a browser in existence which comes close to offering the functionality a decent FTP client can offer."

With this influx of new blood in mind, perhaps it's time to devote some Amiga.net column inches to a type of Internet application which long term users take for granted, but which newbies could be forgiven for knowing very little about: the FTP client.

FTP stands for File Transfer Protocol. Once upon a time, before the web appeared, the standard means of transferring files over the Internet was to use a command line-based FTP program to upload or download archived software to or from a remote site. In those days, locating a file on a remote site involved using a tool called Archie. Using the appropriate software you could query a database stored on an Archie server which contained details of files stored on a host of public FTP sites around the world.

Nowadays you can query an Archie server on the web, although you can also perform searches from within many modern graphical FTP programs.

With the popularity of the web, FTP has rather fallen by the wayside and many Net users nowadays don't know what Archie is, and certainly don't make regular use of it.

Most web browsers offer a degree of FTP functionality in that they can initiate downloads from remote FTP sites. However, there isn't a browser in existence, on any system, which comes close to offering the sort of functionality that a decent graphical FTP client can offer.

ADVANTAGES TO FTP

For a start, with an FTP client you can upload files to a remote site, something very few web browsers let you do. If your ISP provides free web space and you want to make use of it, you'll need a decent FTP client to upload your pages.

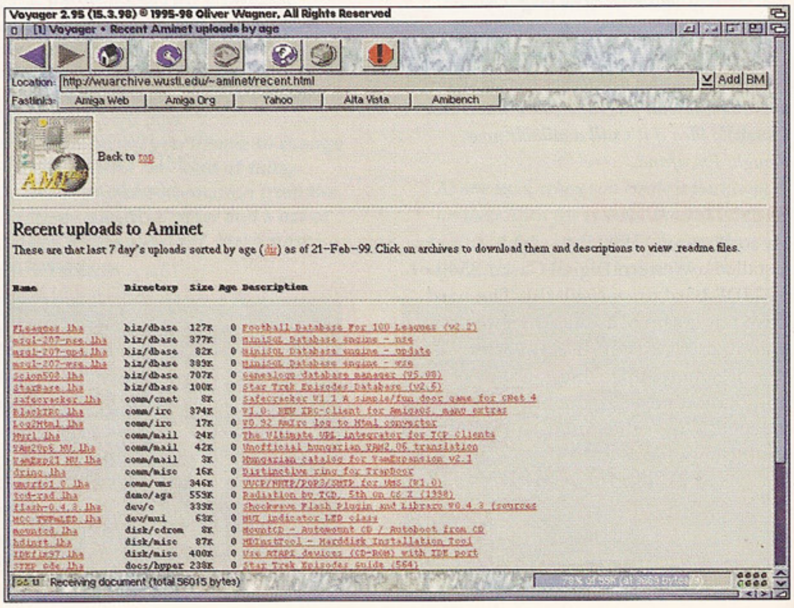
Public FTP sites don't tend to ask you for a password before you enter, but if a friend has some files on his hard drive which he'd like to make available to you and a select few others, he could run an FTP server on his machine and allow Internet users to access the site only when the appropriate password was supplied.

FTP clients almost invariably provide site address books which let you store the addresses and passwords of the remote sites you access most commonly. You could use this, for instance, to store the details of the server to which you have to upload pages for your website, as well as nearby Aminet mirrors, or other file archives you regularly visit.

There are numerous other advantages to using an FTP client rather than a web browser for downloads. The most obvious is that if your connection is dropped when you're downloading a file in a browser, you'll have to start the download again from scratch.

By contrast, FTP clients almost invariably let you resume a download from the point at which the connection was lost. Not all FTP servers let you resume downloads as some older servers don't run software which supports this, but the vast majority of them do and it's a real time saver.

Another nice feature supported by the best Amiga FTP clients, such as



You could download files from Aminet using your browser but it's a much more pleasant experience with an FTP client.

CONTACT POINT

I can be reached with comments, suggestions and feedback at dave@dcus.demon.co.uk, or via my website at http://www.dcus.demon.co.uk/.

USEFUL URLS

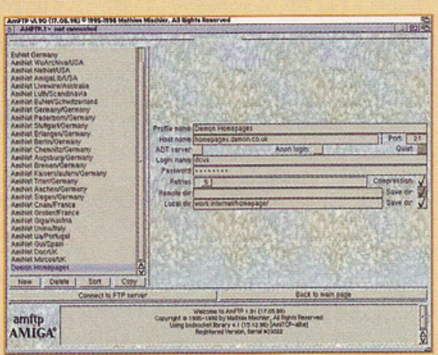
LS-FTPD – http://www.bugss.org/lsftpd/ls-ftpd_eng.html
AmFTP – http://www.vapor.com/

UPLOADING FILES TO A WEB SERVER

Quite a few readers have emailed asking me to explain the procedure for uploading HTML pages to an ISP's web server. It's actually extremely straightforward.

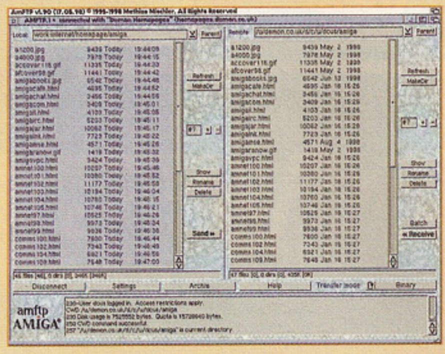
In *AmFTP*, create a new site profile by clicking on the New button at the bottom of the site listview. The Profile Name can be anything you like; this is just to identify this site profile in the site listview. Your ISP support pages online will give you the address of the site you need to access; this goes into the Host Name.

For FreeServe, this needs to be "uploads.webspace.freeserve.net". Since the majority of FTP connections are normally made using port 21, you should leave the port setting alone unless your ISP instructs you otherwise.

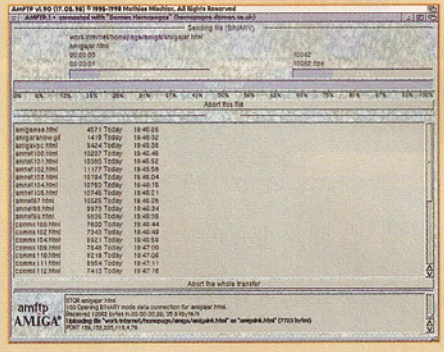


Make sure the boxes marked ADT Server and Anon Login are both unchecked and enter your login name. For my Demon account this is just "dcus", my ordinary login name. Freeserve users should enter "dcus.freeserve.co.uk" or the equivalent.

The password will be your normal dial-up account password. The Local Directory is the folder on your hard drive in which your HTML files live. You almost certainly won't need to enter a Remote Directory.

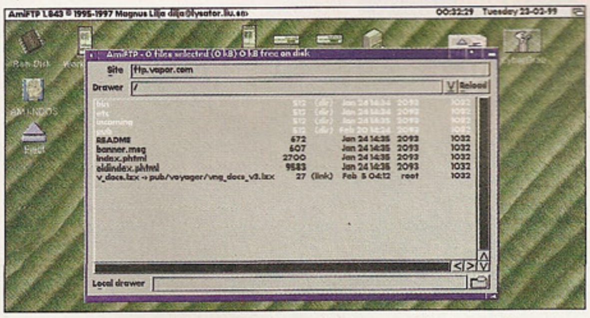


When all that's done, go online and click Connect To FTP Server. All being well, you should be able to connect to your ISP's web server quickly and successfully. Here I've moved into a folder on the remote site called Amiga (which is a subdivision of my website which I created using the MakeDir command some time ago) and moved into my Amiga folder locally. Then I can simply select the files I want to upload in the window on the left and hit the Send button.



***AmFTP* will then start to transfer the files one at a time. A progress meter shows you how far through uploading a particular file the program currently is, and another meter indicates the proportion of the whole uploading operation which has been completed.**

When *AmFTP* has finished uploading the files and returned to the main connected screen you can either upload more files or click Disconnect to finish the FTP session.

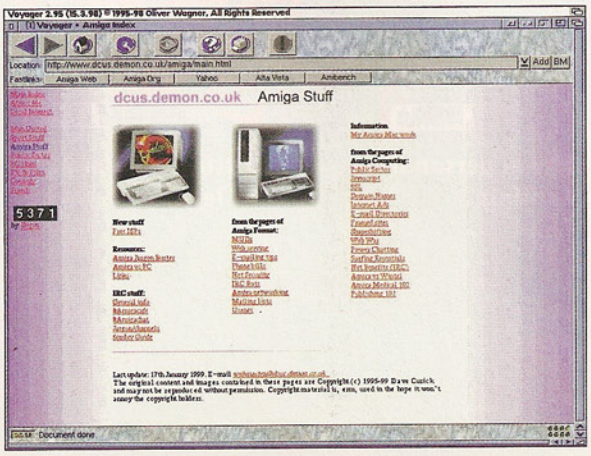


This is *AmiFTP*, one of the many Amiga FTP clients.

AmFTP, is the Amiga-specific function, ADT. ADT lets you view files which have recently been added to Aminet; you can view files uploaded in the last week or fortnight, or those which have been uploaded since you last visited.

In fact, Vaporware's *AmFTP* is, to my mind, the best FTP client on the Amiga. It's laden with features and its attractive and intuitive *MUI* interface makes it exceedingly easy to get to grips with. But it's by no means the only decent FTP client available, and other popular popular programs include *AmiFTP*, *GUI-FTP* and *MFTP*.

Fancy your own website? You'll need a decent FTP client to upload your pages to your ISP's server.



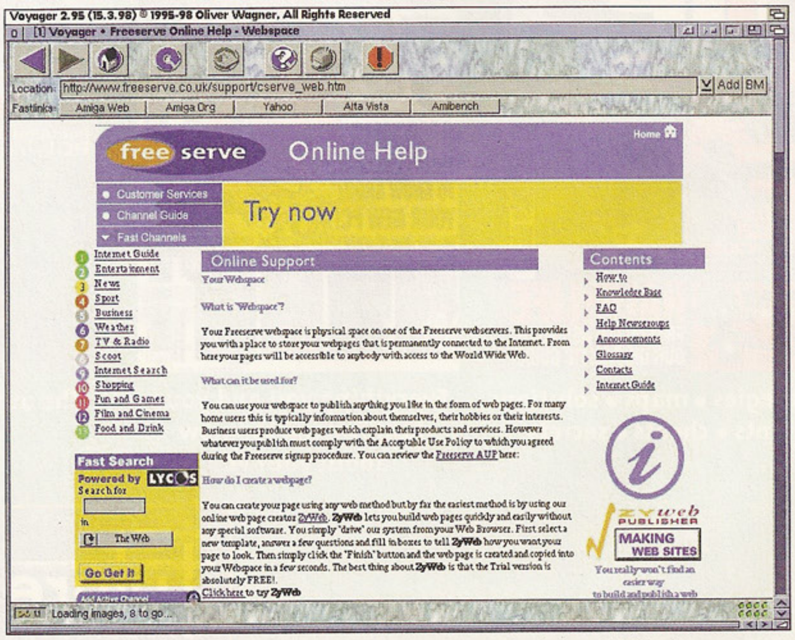
ALTERNATIVES

If you don't fancy working with a conventional FTP client, programs such as *FTPmount* (available from Aminet, unsurprisingly) and Directory *Opus'* excellent FTP module allow you to access remote sites as if they were ordinary drawers on your hard drive.

It's not particularly difficult to turn your own computer into an FTP server on the net either. You'll need the appropriate software of course; something like *LS-FTPd* will do the job nicely.

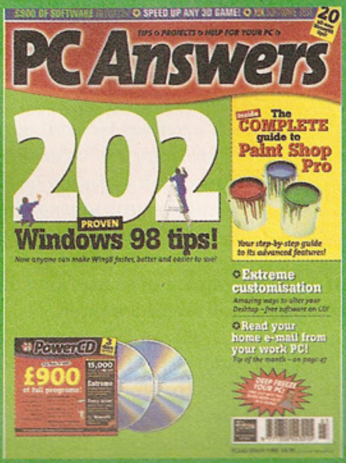
If your ISP gives you a static IP address, as Demon and several other large pay-for-access ISPs do, then you have an advantage because once you've publicised your IP address people will be able to access your FTP site whenever you're online.

If your Internet Service Provider allocates you a different, dynamic IP address every time you go online, anyone wanting to access your FTP site will need to keep pointing their FTP clients at different locations. AF

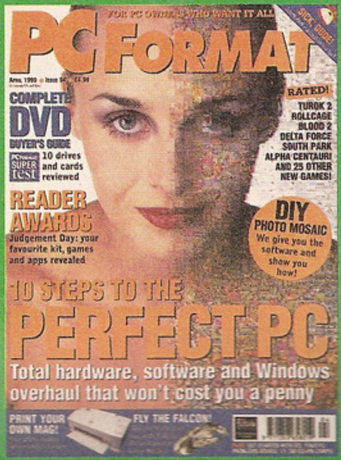


The details you'll need to enter into your FTP software to upload pages will be given somewhere on your ISP's website.

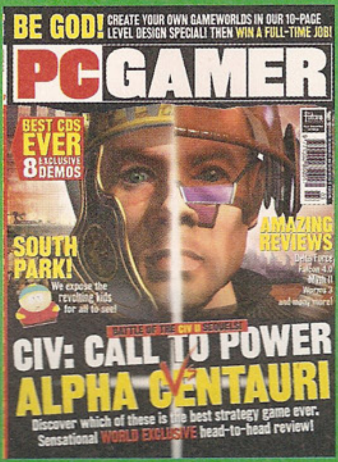
If you've got a PC as well, WE'VE GOT IT COVERED!



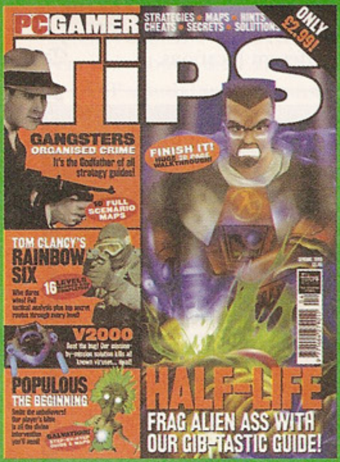
The essential guide for anyone who wants to make the most of their PC.



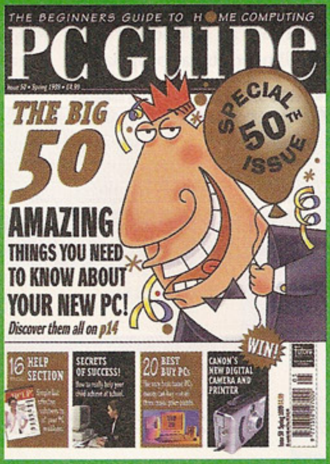
The world's best-selling PC leisure magazine.



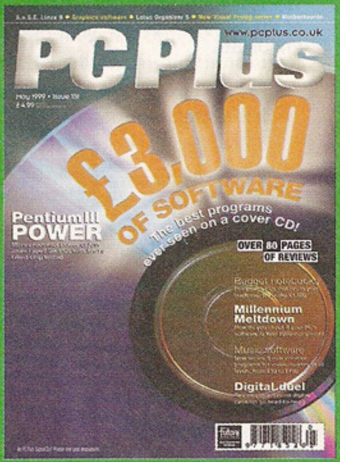
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CREATIVE

The indispensable guide to getting the most out of your Amiga



Fortunately for Colin, he is being retired from his brief stint as the Creative Intro Model. Unluckily for me (and perhaps you), I'm his replacement. Oh, well...

We only have three tutorials for you this month, but there's so much packed into these three that your brain cells will be amply exercised until the next issue.

Two new series began last time around. This is early days still but we've already had an enthusiastic response on the afb mailing list for both. Simon continues Banging the Metal, the tutorial for those of you not afraid to dirty your fingers with the nuts and bolts of their Amiga's custom hardware. For users content to experience life at a higher level, Nick explains arithmetic and decision making in his quest to make ARexx useful. Finally, Neil's HTML series is progressing steadily. In this instalment he takes a look at how to create forms and allow users of your web pages to input information.

Richard Drummond

SEND IT IN!

WE NEED YOUR INPUT.

Is there something that you would like to see covered in one of the current tutorial series? Why not send your suggestion to us at the magazine. Here are some things you might like to think about:

PROGRAMMING

Is there a language you can't get to grips with? Or maybe you want to know how to do a specific thing in C or ARexx? You might never find the answer unless you write in and tell us about it!

UNDER THE BONNET

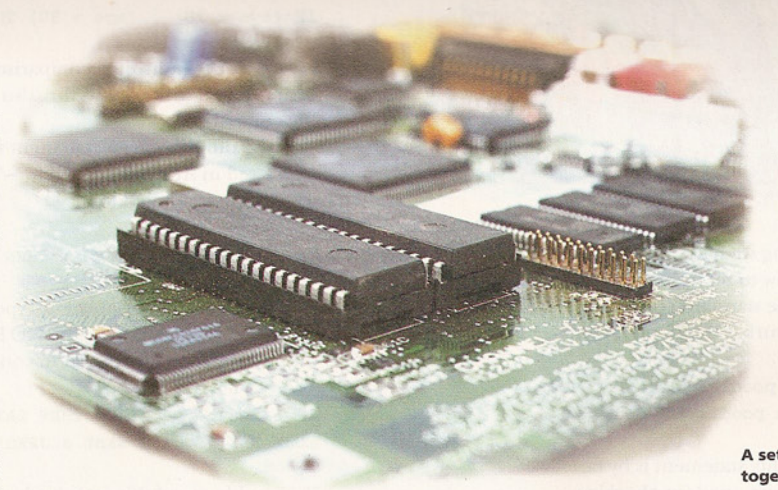
Unsure of how how your Amiga really works. Not sure if you are getting the best from your hardware? Write to us.

GRAPHICS

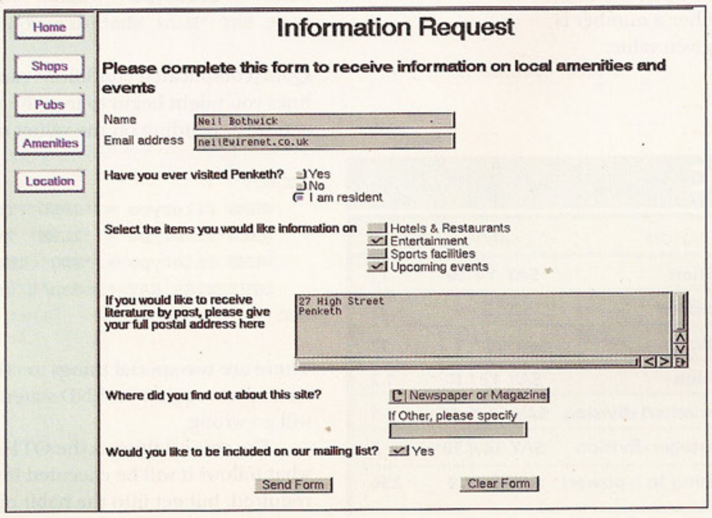
Is there something you desperately want to be able to draw? Drop us a line! Contact us at:

AF Creative • 30 Monmouth Street
Bath • Somerset • BA1 2BW
or email: amformat@futurenet.co.uk
putting "Creative" in the subject line.





A set of chips, working together. Probably.



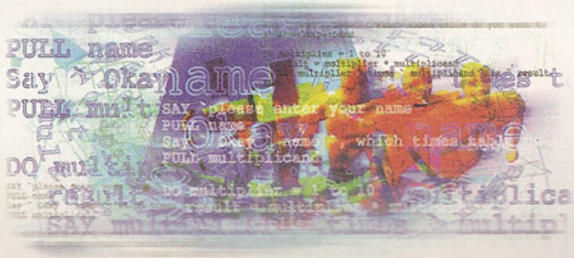
Forms are common on many websites. We explain how you can make use of them on your site.

Useful ARexx

Nick Veitch sums up how to use mathematical functions and variables in your ARexx scripts.

Last month we talked about variables, which are the bare essentials of a program. Variables in themselves are no use though, unless you can do something with them, so this month we'll look at some more ways you can manipulate them, by comparing and checking them, and also how to perform maths.

> *This illustrates two useful programming techniques. The first is error correction on values entered by the user.*



The first thing we have to understand is how to set up the comparisons. The standard command for this kind of work is the IF statement:

```
IF dogtype = 'poodle' THEN say 'I
used to have a poodle too'
```

The simple equality statement is by far the most useful one, used for checking when certain things should or should not happen, but you can use other comparisons too. For example, use this statement to check whether a number is higher or lower than a given value:

```
IF number > 20 THEN...
IF number < 20 THEN...
```

ARITHMETIC

SYMBOL	EXPLANATION	EXAMPLE	RESULT
+	Addition	SAY 1 + 10	11
-	Subtraction	SAY 3 - 4	-1
*	Multiplication	SAY 10 * 1.2	12
/	Division	SAY 12 / 10	1.2
%	Integer (whole number) division	SAY 12 % 10	1
//	Remainder of integer division	SAY 12 // 10	2
**	Exponention (raising to a power)	SAY 2 ** 8	256

Contents

If you've missed any tutorials in this series, call our back issue hotline on 01458 271102.

Used with further boolean statements like AND (which uses the ampersand '&' symbol in ARexx) or indeed, er, OR (which uses the bar symbol '|'), you can combine comparisons:

```
IF (age < 18) | (age > 30) THEN SAY "You can't join our tacky holiday
club"
```

Note that the individual comparisons are enclosed in brackets which makes them easier to understand, and this also means that they're evaluated before the rest of the comparison.

The other boolean statement which can save you some typing is NOT. This is expressed in ARexx by the tilde '~' symbol and basically inverts the result of whatever it is applied to:

```
IF ~(filetype = 'JPEG') THEN SAY "I only deal with JPEGs"
```

In this case, if the variable FileType holds the string 'JPEG' then the condition inside the bracket is true, the NOT statement makes it false and the message isn't output. Another dimension to conditions is added by the ELSE statement:

```
IF filetype = 'JPEG' THEN SAY "Oh goody, I like JPEGs"
ELSE SAY "Boo! I want a JPEG"
```

You could extend this even further by adding more conditions:

```
IF filetype = 'JPEG' THEN SAY "Mmmm... JPEGs"
ELSE IF filetype = 'ILBM' THEN SAY "Mmmm... bitmaps"
ELSE SAY "Doh! What are you trying to do?"
```

Quite complicated conditions can be constructed in this way, but after two or three lines you might begin to lose the plot. There's another way to choose a path of action, depending on the values of a variable or variables; the SELECT statement:

```
SELECT
   WHEN filetype = 'JPEG' THEN SAY "Processing a JPEG now"
   WHEN filetype = 'ILBM' THEN SAY "Processing a ILBM now"
   WHEN filetype = 'PNG' THEN SAY "Processing a PNG now"
   OTHERWISE SAY "I don't understand this file"
END
```

There are two special things to take note of here. The first is that the SELECT statement requires an END statement to close it off – if you don't put one in, things will go wrong.

The second thing is the OTHERWISE statement. It's like a global ELSE, and what follows it will be executed if none of the previous conditions are met. It isn't required, but get into the habit of using it – if there's no OTHERWISE statement

and none of the previous conditions are met, the program will generate an error and will stop.

Okay, it's time for a sample program. In Listing 1 I've utilised some of the techniques we've talked about to create a program which will roughly evaluate the value of your music collection (very roughly). When run, the user types in the type of music (for example, CD for CDs), and then how many there are of that type. It then goes back and asks for another music type and so on until the user presses end.

This program illustrates two useful programming techniques. The first is error correction on values entered by the user. The second, the DO...FOREVER loop, won't end until the user has entered a valid input.

The LEAVE command is a special ARexx statement which causes the program to immediately exit the current DO loop (whatever type it is) and jump to the next line after the END statement. Using this in conjunction with the SELECT statement is a flexible way of scanning for input. The program can easily be changed to accept other entries, simply by adding another WHEN condition.

Incidentally, you'll notice that the WHEN condition only checks for the words entered in upper case, but the program will still accept "Tape" as a valid input. This is because PULL automatically translates characters into upper case, but we'll explain more about that next month.

The second technique is the use of a flag. A flag is simply a term used to describe a variable which is used to indicate to some part of a program that a special condition has been met.

In this case, we rather cunningly used the Factor variable as a flag by setting it to a value it could not otherwise be unless we had specifically set it to that. The program takes this as the signal that the user wants to end the program and get the total, so it quits the main entry loop.

I suppose another technique demonstrated in this program could be said to be a flexible input structure. There's no limit to the number of entries the user can make and there's no reason why they can't enter 12 CDs, followed by 15 CDs if they want to – the program keeps looping around and adding up the totals until the user wants to quit.

I hope you can understand what's going on in this listing as it's a bit more complicated than last month's, but I reckon that you've got a month to figure it out and we want to get moving quickly so we can write more useful programs.

Play around with this listing, try entering some more types of music and experimenting with the loops and I'll think up some more devilish examples for next month.

Listing 1

```
/* records */

/* Set up values for each type of music */
Cost_of_CD = 12
Cost_of_Single = 3.5
Cost_of_tape = 11

/* Set the total value to zero - we don't need to do this, but */
/* sometimes it makes it easier to read the program if you do */
/* declare important variables at the beginning */

Total = 0

/* The main program loop starts here - don't worry, we can */
/* really get out of it! */

DO Forever

   /* Immediately we start another loop to check the type of music */
   DO Forever

      SAY "What type of music (TAPE/SINGLE/CD or END for the total)"
      Pull type

      /* Now we use select to check for a valid entry */
      /* and set a multiplication factor */

      SELECT

            WHEN type = 'CD' THEN DO
                  FACTOR = Cost_of_CD
                  LEAVE
                  END
            WHEN type = 'SINGLE' THEN DO
                  FACTOR = Cost_of_Single
                  LEAVE
                  END
            WHEN type = 'TAPE' THEN DO
                  FACTOR = Cost_of_Tape
                  LEAVE
                  END
            /* if the user has typed end, we can set */
            /* the factor to zero to act as a flag   */

            WHEN type = 'END' THEN DO
                  FACTOR = 0
                  LEAVE
                  END
            OTHERWISE SAY "Invalid entry"
      END /* This line ends the select statement!*/
   END

   /* If the factor is 0 the user entered END and we should */
   /*  exit this loop too */

   IF Factor = 0 THEN LEAVE

   /* Ask how many, calculate value and add to total */

   SAY "How many of this type?"
   PULL number
   total = total + (number * factor)

/* Now we go back to ask for another type of music */
END

SAY "The total value of your collection is roughly " total "pounds!"
EXIT
```

Banging the Metal

Simon Goodwin reveals how the Amiga custom chips work together.

Last month we saw how the custom chips fit into the Amiga's memory. Now we investigate how they're synchronised in time. Display, sound, disks and processors share chip memory, communicating with over 25 Direct Memory Access (DMA) channels, in the most elegant part of the Amiga design. Urgent sound, video and disk data transfers are given priority, leaving spare slots for the Copper, the Blitter and the main processor.

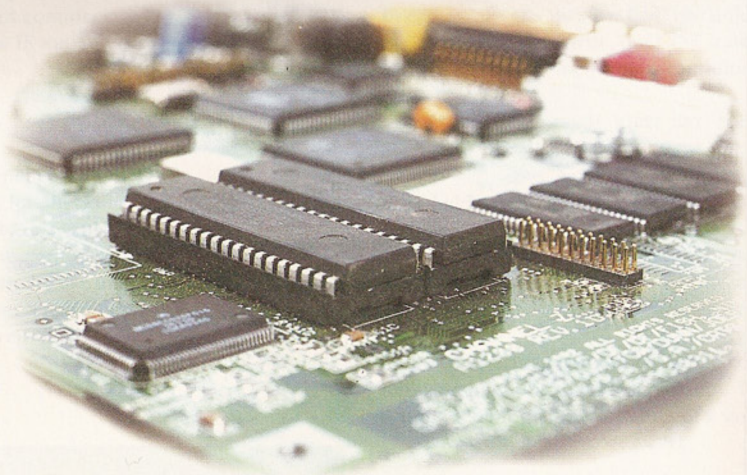
> The Copper is constantly active but only gains priority over the CPU for a few microseconds at a time...

Amiga system timing revolves around the video beam. Every 64 microseconds, or faster at Multisync scan rates, a line of up to 1440 pixels must be generated. Every pixel could be a different colour, and sprites in contrasting resolution and colours may be superimposed on the line. Meanwhile, the Amiga maintains four-channel audio and disk data transfers, leaving spare time for three or more co-processors.

The beauty of synchronising operations with the video scan is that it facilitates feats that leave other systems standing, splitting displays into 'slices', varying colours and resolutions, switching from one scan to the next, gaining smooth horizontal and vertical scrolling with virtually no CPU overhead. Draggable screens show just how powerful this technique is.

Updates synchronised with the beam prevent glitches, common on lesser computers, where graphics change part-way through the scan, revealing momentary mixtures of old and new images. Beam avoidance saves memory and data copying, using just one display area rather than flipping two or three copies of the frame which is the costly alternative cure for flicker.

Overlaid sprite patterns can be moved with a single instruction, without disturbing the backdrop. They're re-usable so one screen can have literally hundreds, with up to eight per scan line. Demos add scrolling starfields this way, independent of the main picture.



Contents

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MISSION STATEMENT

This advanced tutorial series explodes the myth that only hackers and lamers program the Amiga custom chips. It reveals and explains things that are possible given an intimate knowledge of the Amiga custom hardware, and programming it directly. Each month, files on the *AFCD* support and extend the tutorial on these pages.

ON THIS MONTH'S CD

DMA TIMING CHART

The Timing Chart builds upon Figure 6-9 of the Amiga Hardware Reference manual, the key page in that generally illuminating tome. It shows exactly how the Amiga shares time between DMA devices during each display scan, in 280nS slots.

When the display is active, much time is spent fetching playfield data. The more planes, the greater the demand on chip RAM. If possible, the Amiga leaves alternate slots free, striped in yellow, for other processors to access chip RAM. If less than four planes are in use, the blitter can use the odd slots which have been left vacant.

If more than four fetches are required they encroach on Copper, Blitter and CPU time, shown by reddish bit plane DMA stripes overriding the yellow processor DMA ones, with five to eight planes active. The extreme cases are 16-colour OCS HiRes or 256-colour AGA SuperHires, when the processors only gain access during the border.

Screen border time is used for memory refresh, sound, floppy disk transfers and up to eight sprites, leaving rather a wide left border in Multisync modes on non-Amiga monitors. Other processors compete for alternate cycles. Scrolling and extra-wide (overscan) video displays reduce the number of sprites available. The minimum is one,

SAMPLE DMA REGISTER BIT ASSIGNMENTS

Bit	DMACON	DSKBYTR
15	Set/Clear	Data Valid
14	Blitter Busy	DMA active
13	Blitter Zero	Disk writing
12	Unassigned	Sync match
11	Unassigned	Unassigned
10	Blitter Nasty	Unassigned
9	Master DMA	Unassigned
8	Bitplane DMA	Unassigned
7	Copper DMA	Data bit 7
6	Blitter DMA	Data bit 6
5	Sprite DMA	Data bit 5
4	Floppy DMA	Data bit 4
3	Right audio 2	Data bit 3
2	Left audio 2	Data bit 2
1	Left audio 1	Data bit 1
0	Right audio 1	Data bit 0

for the mouse pointer; the maximum is eight, with no overscan.

EXAMPLE PROGRAM

The listing uses HiSoft *BASIC* to monitor disk and audio memory access. It works by checking the DMACONR and DSKBYTR registers at regular intervals. The only explicit system call is to Delay, in the DOS library, linked by the first couple of lines. This prevents the program from hogging the CPU, updating faster than the eye can see, by periodically surrendering time to other tasks.

The value after Delay, near the end, counts display fields before the loop repeats. Press Control C to stop the task. On my PAL A4000, Delay &20 permits updates two or three times per second, draining less than 1.5% of the CPU time. Delay &10 updates twice as fast, six times per second on NTSC displays, and so on. Alternatively, you might give the program a negative priority so it defers to foreground tasks.

Scattered &s indicate HiSoft *BASIC* long word values, versus % for 16-bit integers. &H precedes hex values (like $ in *Assembler* or 0x in C) such as the custom register base, &hDFF000, and &B denotes binary.

DISK DMA

The floppy disk DMA channel can read or write data to up to four drives. The second and third most significant bits in DSKBYTR show when this is happening. The second (bit 14, masked out with binary in the listing) is set while disk DMA is in progress. The third (bit 13) is set during floppy writes.

This helps reveal why your drives are grinding away. Some programs leave the drive motors running when there's no DMA so disks can safely be removed. Beware of removing a disk even when apparently just reading; the system may switch to writing before your finger reaches the eject button. You'll soon learn when this is likely with *DMAmon* as your guide.

SOUND DMA

It's similarly useful to monitor active sound channels. Sound channels are a scarce resource and should be shared. Some applications require channels and a few nasty ones hog them, even when not in use. *DMAmon* shows the status of each of the four channels dynamically, with 0 signifying a free channel and 1 if the channel is in use.

You could recode this to use graphics or left/right grouping rather than hardware channel order. I've done it the obvious way for *BASIC*, extracting four adjacent bits with AND, then converting to binary with BIN$. The prefix "000" and RIGHT$(,4) make leading zeros explicit.

Amiga registers normally combine several functions, assigning distinct control to each bit. Each one- or zero-bit indicates a distinct state in the underlying hardware. The table on the previous page lists the significance of bits in DMACONR and DSKBYTR.

DMACONR is a read-only version of DMACON. Like other crucial controls, the 'top' (most significant) bit indicates setting or clearing of other bits, so a single write with one bit set CLEARs just that bit. If the top bit and others are set, those are added to the ones already set. This brilliance saves reading, masking and writing values back, and eases Copper programming.

These are readily accessible, but not the only DMA control bits. BPLCON ($DFF100) determines the number of bitplanes in use. There's no BPLCONR so you must record changes. *DMAmon* doesn't monitor bitplane DMA as it's static for a given display mode and you won't see anything if it's turned off. Sprite DMA could be monitored but most programs disable sprites by changing to a small transparent pattern or parking them in the border, rather than stopping their DMA.

The Copper is constantly active but usually only gains priority over the CPU for a few microseconds at a time. It would be interesting to monitor Blitter activity but difficult in Amiga OS windows; the system uses blits to update them so you can't report the Blitter's status unless it's idle.

NEXT MONTH

We'll delve deeper into the custom chips with details of the general-purpose CIA registers, including parallel port and disk control lines, in the next tutorial.

Listing: DMA Monitor

HiSoft *BASIC DMAmon* program. An extended version of this can be found on *AFCD39*.

```
REM $INCLUDE dos.bh
LIBRARY OPEN "dos.library" ' For Delay function
WINDOW 1," Hisoft BASIC Amiga DMA Monitor", _
    (256,16)-(256,76),1+2+4+16+256

' Hardware addresses

CUSTOM& =&HDFF000
DMACONR&=CUSTOM&+2
DSKBYTR&=CUSTOM&+&H1A

LOCATE 2,1
PRINT "  Sound channel status "
PRINT "  Floppy disk activity "

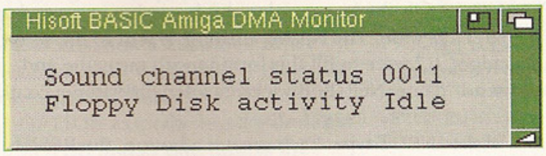
REPEAT poll

    DMA%=PEEKW(DMACONR&) : LOCATE 2,24
    PRINT RIGHT$("000"+BIN$(DMA% AND &B1111),4)

    DiskFlags%=PEEKW(DSKBYTR&) : LOCATE 3,24
    IF (DiskFlags% AND &B0100000000000000)=0
          PRINT  "Idle   "
    ELSE
          IF (DiskFlags% AND &B0010000000000000)
                   PRINT "Writing"
    ELSE
                   PRINT "Reading"
    END IF
END IF

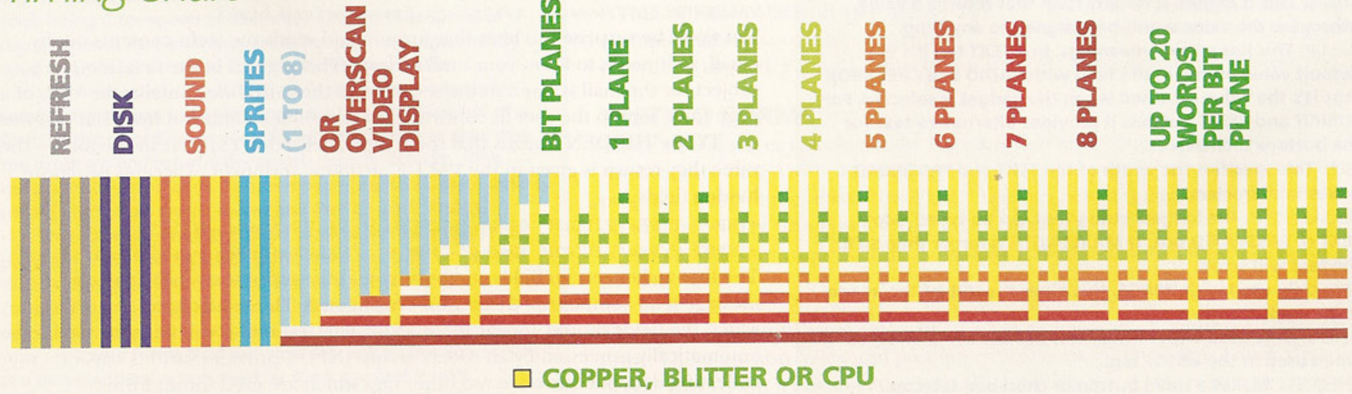
Delay &10 ' Update 5 or 6 times per second

END REPEAT poll
STOP ' Control C, then press any key, to Quit
```



DMAmon **active in a Workbench window.**

Timing Chart



Using HTML

Neil Bothwick explains how to use forms on your websites.

ON THIS MONTH'S CD AFCD39:-In_the_mag-/Using_HTML

Everything we've covered so far has been about creating pages that can be viewed. Apart from the basic mailto: link to let visitors send you an email, there's been no way of generating feedback from visitors to your site. In this tutorial we'll do something to fix that and look at how you can use forms to generate some two-way traffic for your site.

Forms use a CGI program (see boxout) to process the data. Most ISPs don't permit the uploading of custom scripts for home pages because of security issues, but they generally provide a set of pre-configured scripts for form and guestbook handling. You should check with your ISP's technical support or website for the exact details you need. For now, we'll use the formmail.pl script available to Wirenet subscribers. This is a very popular script used by many ISPs.

Contents

If you've missed any tutorials in this series, call our back issue hotline on 01458 271102.

Let's get started with a very basic form:

```
<FORM ACTION="http://www.personal.u-net.com/cgi-bin/formmail.pl"
METHOD="POST">
```

We open the form by specifying the program to handle the form data and the method used to send it.

```
Name <INPUT TYPE="TEXT" NAME="name" SIZE=40><BR>
Email <INPUT TYPE="TEXT" NAME="email" SIZE=40>
```

INPUT is the main tag used in forms and it creates a gadget with which the user can input information. TYPE="TEXT" tells the browser that this is a string input gadget and SIZE=40 makes it 40 characters wide. The NAME attribute is sent to the script along with the data in the gadget. If I were to fill this form in with my name and address, the browser would send "name=Neil+Bothwick&email=neil@wirenet.co.uk".

```
<INPUT TYPE="SUBMIT"> <INPUT TYPE="RESET">
```

These are two special cases of the INPUT type. Each creates a button, the RESET button clears the form and the SUBMIT button sends the data to the URL in the ACTION attribute.

```
</FORM>
```

Finally, we close the form container.

This form will send the information the user types to the formmail.pl script but the script won't know what to do with it. To tell the script what to do with your data you need some more INPUT tags:

```
<INPUT TYPE="HIDDEN" NAME="RECIPIENT" VALUE="me@myisp.com">
<INPUT TYPE="HIDDEN" NAME="SUBJECT"   VALUE="Results of my first
form">
<INPUT TYPE="HIDDEN" NAME="REDIRECT"
VALUE="http://www.me.myisp.com/formreceived.html">
```

You won't be surprised to hear that formmail.pl sends the form contents out by email, so it needs to know your mail address. This is given in the first line, the subject for the mail is given in the second and the third line contains the URL of a page to be sent to the user as confirmation that their submission has been received.

TYPE="HIDDEN" means that these input fields don't appear in the form – the value they return is given in the VALUE attribute. formmail.pl accepts two more hidden fields.

```
<INPUT TYPE="HIDDEN" NAME="REQUIRED" VALUE="name,email">
<INPUT TYPE="HIDDEN" NAME="SORT"     VALUE="order:name,email">
```

The first makes certain fields compulsory and the script sends back an error message if all compulsory fields aren't completed. The second gives the order in which the fields should appear in the mail. This is useful if you want the mail to be automatically processed by an ARexx script. INPUT provides various ways of collecting data but there are two other tags which are used within forms. TEXTAREA creates a multiline text box suitable for free form text input.

INPUT GADGETS

The INPUT tag can be used to create a number of different input gadgets:

PASSWORD: This is the same as TEXT except that the data typed in appears as asterisks. Note that the data is still sent as plain text – this only protects it from being read directly from the screen.

CHECKBOX: Creates a checkbox. Each one requires NAME and VALUE attributes that are returned if the box is selected. You may have multiple checkboxes with the same name and different values; the browser will return the name and value for each one that's selected.

RADIO: Creates a radio button. You would normally have several RADIO tags, each with the same name and a different value. Only one may be selected at a time; selecting a second unselects the first.

IMAGE: Uses the image specified in the SRC attribute as a submit button. This returns the co-ordinates that are clicked to the script so it can be used as more than just a fancy submit button.

There are several attributes that are applied to these tags:

NAME: This is essential for any item that returns a value, otherwise the value won't be assigned to anything.

VALUE: This has several meanings. In a TEXT tag it's the default value placed in the field with RADIO and CHECKBOX tags it's the value returned when the gadget is selected. For SUBMIT and RESET buttons it provides alternative text for the buttons themselves.

SIZE: This specifies the width of the TEXT and PASSWORD boxes in characters.

MAXLENGTH: The longest string that can be typed into a TEXT or PASSWORD box. If MAXLENGTH is larger than SIZE, the text will scroll.

SRC: Only used with IMAGE, this gives the URL of the image to be used.

ALIGN: Only used with IMAGE, this has the same effect as when used in the <IMG> tag.

CHECKED: Makes a radio button or checkbox selected.

```
<TEXTAREA NAME="address" ROWS="6"
COLS="60"></TEXTAREA>
```

provides a box of six rows of sixty characters for the user to type their address. ROWS and COLS set the physical size of the box, but this doesn't restrict how many characters or rows may actually be typed. Any text between <TEXTAREA> and </TEXTAREA> appears in the box.

SELECT will render as a cycle gadget, popup menu or list box, depending on its attributes and the browser used.

```
<B>What is your main use of your
Amiga?</B>
<SELECT NAME="MainUse">
    <OPTION>Word processing/DTP
    <OPTION>Graphics
    <OPTION>Music
    <OPTION>Internet
    <OPTION>Games
    <OPTION>Other
</SELECT>
<BR>
<INPUT TYPE="TEXT" NAME="Other"
SIZE="20">
```

This sets up a SELECT gadget with six choices. The text from whichever option is selected will be sent as the value, such as "MainUse=Internet". This only allows one item to be selected from the list. For multiple selections you need to add the MULTIPLE attribute to SELECT.

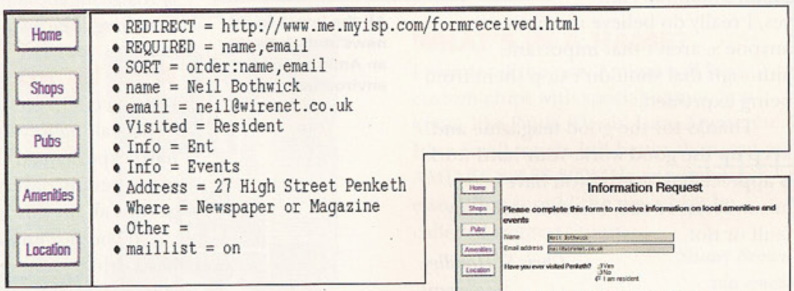
If you do this, you also need to use the SIZE attribute. This is the length of the list as rendered on screen. It defaults to one, rendering the list as a cycle gadget or popup menu which is unsuitable for multiple selections. SIZE=5 will show a list which is five lines high, with a scrollbar if there are more than five items.

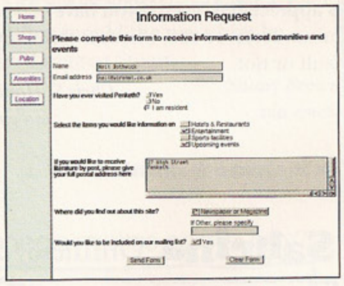
OPTION can take two attributes. SELECTED makes that option the default. VALUE is the string to be returned if that option is selected; it defaults to the option text.

Listing 1: A form using most of the available elements

```
<FORM METHOD="POST" ACTION="http://hoohoo.ncsa.uiuc.edu/cgi-bin/post-query">
<INPUT TYPE="HIDDEN" NAME="RECIPIENT" VALUE="me@myisp.com">
<INPUT TYPE="HIDDEN" NAME="SUBJECT"   VALUE="Information request form">
<INPUT TYPE="HIDDEN"NAME="REDIRECT"VALUE="http://www.me.myisp.com/formreceived.html">
<INPUT TYPE="HIDDEN" NAME="REQUIRED"  VALUE="name,email">
<INPUT TYPE="HIDDEN" NAME="SORT"      VALUE="order:name,email">
<TABLE>
<TR VALIGN=TOP><TD>Name <TD><INPUT TYPE="TEXT" NAME="name" SIZE=40>
<TR VALIGN=TOP><TD>Email address <TD><INPUT TYPE="TEXT" NAME="email" SIZE=40> </TABLE>
<P>
<TABLE>
<TR VALIGN=TOP><TD><B>Have you ever visited Penketh?</B>
<TD><INPUT TYPE="RADIO" NAME="Visited" VALUE="Yes"> Yes<BR>
    <INPUT TYPE="RADIO" NAME="Visited" VALUE="No">  No<BR>
    <INPUT TYPE="RADIO" NAME="Visited".VALUE="Resident"> I am resident
</TABLE>
<P>
<TABLE>
<TR VALIGN=TOP><TD><B>Select the items you would like information on</B>
<TD><INPUT TYPE="CHECKBOX" NAME="Info" VALUE="Hotels"> Hotels &amp; Restaurants<BR>
     <INPUT TYPE="CHECKBOX" NAME="Info" VALUE="Ent"> Entertainment<BR>
     <INPUT TYPE="CHECKBOX" NAME="Info" VALUE="Sport"> Sports facilities<BR>
     <INPUT TYPE="CHECKBOX" NAME="Info" VALUE="Events"> Upcoming events
</TABLE>
<P>
<TABLE>
<TR VALIGN=TOP><TD><B>If you would like to receive literature by post, please give your full postal
address here</B>
<TD><TEXTAREA NAME="Address" COLS="60" ROWS="6"></TEXTAREA>
</TABLE>
<P>
<TABLE>
<TR VALIGN=TOP><TD><B>Where did you find out about this site?</B>
<TD><SELECT NAME="Where" SIZE=1>
     <OPTION>Search engine
     <OPTION>Tourist Information
     <OPTION>Newspaper or Magazine
     <OPTION>Other
</SELECT>
<TR><TD><TD>If Other, please specify<BR>
     <INPUT TYPE="TEXT" NAME="Other" SIZE="20">
<TR VALIGN=TOP><TD><B>Would you like to be included on our mailing list?</B> <TD><INPUT
TYPE="CHECKBOX" NAME="maillist" CHECKED> Yes
</TABLE>
<P>
<TABLE WIDTH="70%" ALIGN=CENTER>
<TR ALIGN=CENTER><TD><INPUT TYPE="SUBMIT" VALUE=" Send Form "><TD><INPUTTYPE="RESET" VALUE=" Clear
Form ">
</TABLE>
</FORM>
```

Figure 1 (right) shows how the HTML in Listing 1 (above) is rendered in a browser.





The result of sending the form from Listing 1 to the NCSA form test program.

PUTTING IT ALL TOGETHER

Listing 1 shows the source for a form using all the available options, although it's unlikely you'd ever do that on a single form. Since form elements are rendered among the other HTML of the page, a mix of text and HTML will normally look quite messy. This example makes use of tables to keep everything aligned. Figure 1 shows how this HTML is rendered in a browser.

TESTING FORMS

There's a test server running at the National Center for Supercomputing Applications (NCSA). If you want to see exactly what your form is sending to the CGI program, temporarily replace the FORM tag with one of the following, depending on whether you're using the GET or POST method:

```
<FORM ACTION="http://hoohoo.ncsa.uiuc.edu/cgi-bin/post-query"
METHOD="POST">
<FORM ACTION="http://hoohoo.ncsa.uiuc.edu/cgi-bin/query" METHOD="GET">
```

The server will return a page showing the the names and values submitted by your form. There are also query and post-query programs supplied with Amiga Web Server (AWS), but it's probably only worth installing this if you're going to be doing quite a lot of form testing.

CGI PROGRAMS

Forms, and other HTML features, make use of programs running on the web server. These use the Common Gateway Interface standard so you'll normally see them referred to as CGI programs or CGI scripts. A CGI program can be written in any language the server understands, the two most popular ones being C for speed of execution and *Perl* for speed of development. *Perl* is an interpreted script language, mainly used on Unix servers, but there is an Amiga version.

When you click on a link to a CGI program the browser sends information to the program, such as the contents of a form or the co-ordinates you clicked on. The server then runs the program and returns the result, usually as HTML. This means that testing any CGI-based pages needs to done online, unless you install a web server and *Perl* on your Amiga.

There are two methods used to send the data to the CGI program: POST and GET. GET is the older method, where the data is simply tacked onto the end of the URL. This means you can only send a small amount of information. POST sends the data separately and should be used wherever possible. You may see some forms that use a mailto: link as the action. This is a non-standard action used by *Netscape* and it isn't supported in all browsers so it's best to avoid this.





MailBag

Send your letters to: **Letters To The Editor • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW** or email: amformat@futurenet.co.uk – putting 'Mailbag' in the subject line.

THAT'S ALL FOLKS

I've been very surprised at the reaction I got for criticism of parts of one issue of *AF* which is now ages old. It was, after all, only a bit of criticism from my point of view – not exactly important. If I've learnt one thing from newsgroup flame wars, it's that there is a time to say let's agree to disagree and leave it there. I think it's long past that we forget such minor issues, so I won't be corresponding any further on this subject.

I hope that you'll print this small letter, especially given that I wasn't expecting either of the previous ones to be printed. I'm sure it would be nice to close the issue in a sensible and mature manner. And yes, I really do believe my views, or anyone's, aren't that important, although that shouldn't stop them from being expressed.

Thanks for the good magazine and keep up the good work. Your hard work is appreciated, even if you have misunderstood me, whether that's my fault or not.

Chris S. Handley
via email

Let's agree to disagree and leave it there.



Wednesday 17 March 1999

MATCHES

TODAY'S PAPER

'SEE YOU IN THE SEMIS'

FULLY FIT OR HALF-FIT, UNITED'S STAM SAYS RONALDO CAN'T RESCUE INTER

JAAP STAM will march out onto the San Siro tonight utterly convinced that Manchester United will take care of Ronaldo's Inter Milan and move into the Champions League semi-finals.

The giant Dutch defender knows he, and his teammates, are in for a torrid evening as a sell-out crowd attempt to roar Inter on to the result that will overturn their 2-0 defeat in the first leg at Old Trafford. But not even the return of former FIFA World Player Of The Year Ronaldo to spearhead the Italian challenge is enough to shake Stam's confidence.

"The team are very relaxed about the game; we're not overawed going into the game or by what's been written about the intimidating atmosphere," he insisted. "People aren't telling us anything we don't know. Of course it'll be difficult, everyone expects it."

All the latest footy news and views, in an Amiga-friendly environment too.

SPARE US	SEND US
• Long letters with loads of points.	What you want to see in OS3.5. •
• Complaints that *AFCDFind* and *AFCDView* don't work without any info as to why.	Whether you'll pay a deposit for one of phase 5's new accelerators. •
• Your missives on why company X should port their latest PSX/PC title to the Amiga.	Your ideas for the shape of the Amiga's future. •
• Letters asking for Richard's job.	General questions you want answered (not technical ones – that's what Workbench is for!). •
• Technical questions which should be addressed to Workbench.	

THEY SHOOT, THEY SCORE!

I'd just like to say well done to Football 365, a website that actually recognises that operating systems other than Windoze and Mac exist.

Richard Broughton
via email

Perhaps the fact that it was put together by IMM Studios, whose staff have a high level of AmigaSoc attendance, might have something to do with it.

WISE WORDS

I have a couple of tips you might want to pass along to your readers. I myself have experienced this personally, and many people have posted to the Usenet groups about this.

If you buy an Amiga 600 without a hard drive, you might need to upgrade your Kickstart chip before adding a hard drive. When the A600 was shipped without the hard drive, hard drive support was disabled in their Kickstart ROMs, so if you have an A600 and are planning on adding a hard drive, check which version of the ROM you have.

The way to do this is to right-click on the Workbench screen and pull down "About" from the Workbench menu. If the version number ends in a 9, you need to get a new ROM that has HD support (might as well get the 3.1 ROM!); if it ends in a 0 or 5, it's HD-ready. Or you can learn the hard way by getting the hard drive, putting it inside the computer, booting up and not getting an icon.

My other tip is for the opposite, the A4000. I recently got a great deal on a used one and the previous owner was a software developer. He'd apparently been using a lot of equipment before he sold it to me and had failed to remove some of the third-party drivers. I found this out when I tried to run *TurboPrint* and got a visit from the Guru.

Sabrina Online by Eric W. Schwartz ©1998 "You've always wondered"



Check out Sabrina Online at http://www.coak.net/people/erics/

PPC PONDERINGS

After a rather serious, though perfectly amicable, debate with another Amiga user on the Internet, I'd like to bring the subject to the readers of *Amiga Format* to see what they think.

His argument was that people should ignore all the PPC boards out there and wait for the new super Amiga as supporting these accelerator boards would dilute support for the new machine. Furthermore, he argued that the new machine should make no reference to its Amiga heritage as PC users would just ignore it, saying, "Well, it hasn't got Windows so it can't be any good."

I must admit, I can see where this chap's ideas are coming from, but I really have to disagree. Consider this – no current Amiga users buy PPC boards for their machines, waiting for the super Amiga, which subsequently fails to appear. In the meantime, producers of PPC boards have ceased production, due to lack of support. You're then left in a position where you want or need to upgrade, but there's nothing left to upgrade to.

My argument is this: hope for the best, prepare for the worst. If it's out there now and you can afford it, buy it. Don't wait for what may be just over the horizon as it may never come, though we all seriously hope it does.

On his second argument, all I can say is that it won't have Windows in it anyway, whatever you choose to call it. Apple recognise the iMAC as a Mac and it still sells well, so call the machine an Amiga and see what happens. What's required is some good advertising to show people what the machine is capable of. That way, the people with a mind of their own can make an informed decision, while the blinkered Microsoft brainwashed devotees... well, it's their loss and I doubt that anything could convince them of their error.

Before I go, one last word to those who like a good debate and have Internet access: pay a visit to #amirc on Undernet because you couldn't hope to find a more friendly, helpful and intelligent bunch of people.

Steve Challis
via email

I agree with your viewpoint Steve. It's like buying a PC (bear with me). Do you buy one now or wait for the Pentium III machines to come down in price? I know, hold off buying, save up and do without a computer for another two years. The same can be said of video recorders, digital cameras or any technology really. Things will always be faster, better quality and cheaper in the future, but to make that future possible people have to spend money now. If no-one had bought the PlayStation when it was still 400 quid, you can bet that Sony would have given it up as a bad job by now.

The PPC side of the question is a little harder to answer, but if you want a faster Amiga it's your only choice once you've got an '060, and if you have an A1200 then it's a very good way of getting a graphics card.

As for the name legacy, I think the word Amiga has a lot of respect generally. Sure, we're seen as second rate citizens now, but bring out a machine that beats all others at a lower price and people will still flock to it. How else do you account for the popularity of kitchen equipment makers Smeg?

It turns out that *TurboPrint* was accessing the ppc.library, but there was no PPC chip in the machine. I deleted the ppc.library file and *TurboPrint* worked fine. In short, if you buy a used Amiga, check for any libraries, device drivers, etc, and delete any files you can recognise as being specifically for a device you don't have.

Sean C. Courtney
via email

All good advice, perhaps better suited to the Workbench section next time though, Sean.

SIZE CONCERNS

I'm a subscriber to this excellent magazine and I've got all the mags from *AF104*, December '97, and they're all CD versions. When I got your April issue, *AF122*, I also got your *Backstage* leaflet and I read what Ben Vost had to say. Oh no, it's decreased its number of pages even further! Please, any smaller and it would be able to be made into a paper aeroplane it's getting so light!

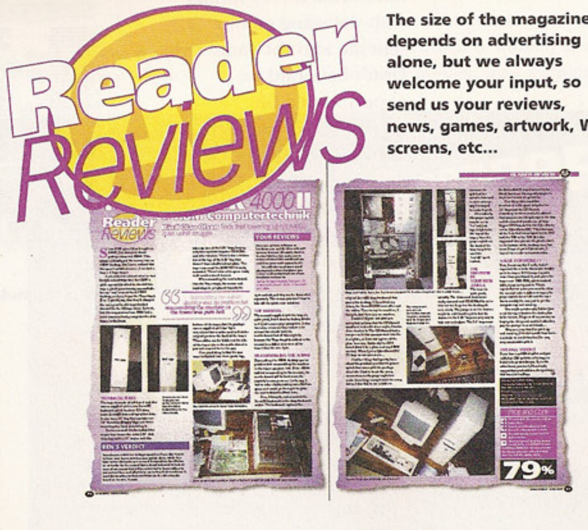
So are there only three people making the magazine? If this is true, well done for what you're doing, but can't you keep the same amount of pages and have more input from *Amiga Format* readers, with their contributions of reviews, reader reviews, Gamebusters cheats or whatever?

If you need help then ask people to become full time assistants with the magazine. I wouldn't mind helping out as I have some hardware knowledge and a pretty extensive variety of old and new games. I recently sent you an email with my hardware specification and my Workbench screenshots.

As you know, the Amiga magazines have been dropping like flies, as did the software companies, so please let us help and keep the Amiga going until this next generation machine comes out.

Simon Hawley
via email
simonhawley@simonhawley.freeonline.co.uk

The number of pages that a magazine has is in direct relation to the number of ads. The more stuff people buy from advertisers, the more they advertise and the more pages we can have. As for reader contributions, we welcome everything we get, but people could always send in more.



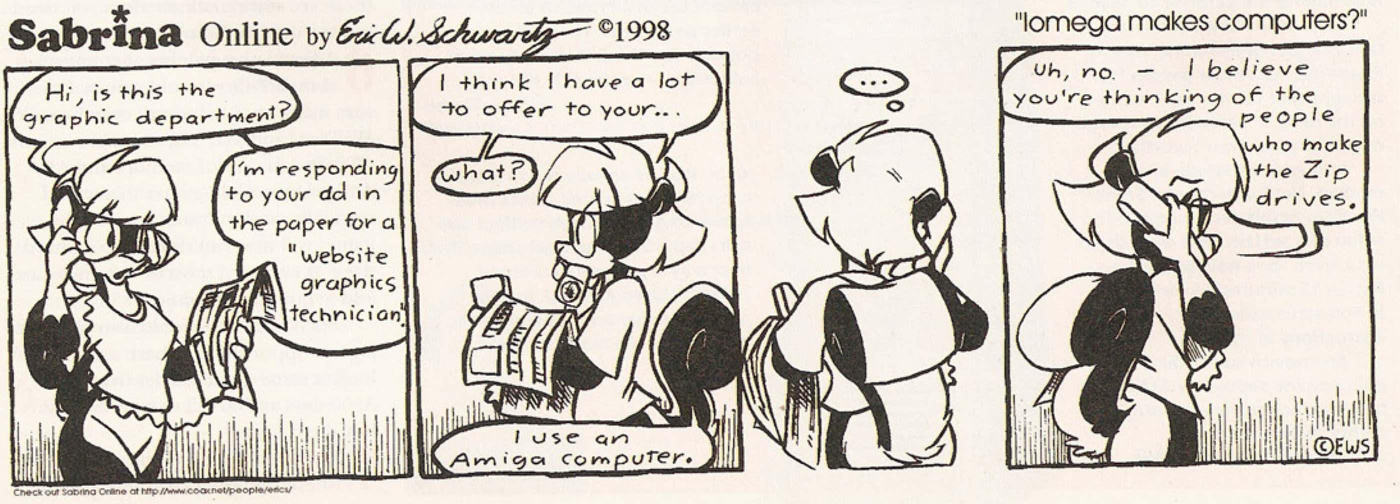
The size of the magazine depends on advertising alone, but we always welcome your input, so send us your reviews, news, games, artwork, WB screens, etc...

WHAT'S IN A NAME?

I wonder if the new Amigas will have custom chips with special names. You know, like Paula, Denis, Lisa, Angus, etc. It's a small touch, but better than, say, an AMD-K6 80586 300MHz or anything else. What should the new chips be called? I suggest Stuart...

Stuart Brown
via email

Continued overleaf ➡



Check out Sabrina Online at http://www.coaxnet/people/erics/

If one was called "Format", people would be ringing up Amiga Inc. saying "In't that Amiga Format chip brilliant!". It could be a good idea, although I'm not sure how many people would go for the Stuart chipset. By the way, it's Agnus, not Angus.

INTERNET FREE FOR ALL!

I'd just like to say that I am now online using Free4all. I wrote in to say that their service is really easy to set up and has instructions on setting up on an Amiga using *Genesis* and *Miami*.

Sometimes I've had problems getting online, but it's really easy to use and easy to add new email addresses, unlike Freeserve. I can recommend it highly. Anyway, thanks for a great magazine. Keep up the good work.

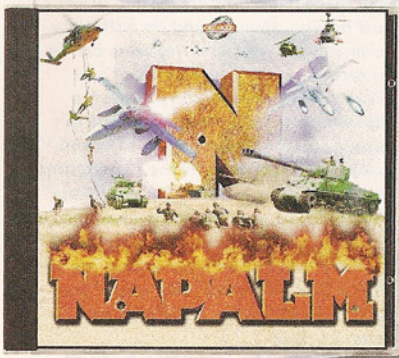
Simon Preston
via email

Regular readers will have noticed that a lot of the letters here in Mailbag are coming from email addresses rather than postal ones these days. Simon's letter is just one of many we've received all saying the same thing. It's easy to get online, it doesn't have to cost the earth and it's a great way to stay in touch with the Amiga scene.

THANKS, CLICKBOOM!

I just wanted to tell everyone about a very nice experience that I had yesterday. I received an open and empty envelope from clickBOOM. Oh no, that wasn't nice – my copy of *Napalm* had been stolen. The next day I emailed clickBOOM and asked what to do. Half an hour later I got a reply, where they asked me not to worry. They said they would mail me another copy immediately, free of charge. Now that's good service!

Peter Eide Paulsen
Copenhagen



That's excellent to hear. Anyone else got any heartwarming stories of good service from Amiga dealers?

They may seem like war-loving, vicious types, but they're jolly nice chaps, really.

AF GREAT! BUT...

I would like to say that most of the criticism aimed at *Amiga Format* in recent times has been unfair. For instance, it isn't possible to review more software than is actually released. I think you're still producing one hell of a mag, considering the situation the Amiga market is currently in.

However, even the master can improve and I've got a few suggestions and ideas for you.

1 Although *AF* looks professionally done, the layout of the mag isn't especially exciting. Try to generate more attention and not pretend to be one of the crowd – after all, it's not just another PC mag. The front pages of the last five issues have looked very similar with the same colour scheme and the same style. Don't be afraid to experiment a bit.

2 Browsing through some old mags I saw that one of your competitors ran a series of articles called 'Meeting of Minds', where people of the industry discussed the future of the Amiga and other issues. Some of the views expressed there were quite interesting.

I see that it might be expensive to get ten 'famous' Amigans physically together in one room because of transport costs and all that, but maybe the Internet could provide a solution?

3 There's too few surprises these days! Before, we used to see cover mounted books, extra disks or CDs and extra special magazines with the mag. It wasn't every month, just every now and then. Maybe a small pack of crisps?

4 Would it be possible to do an emulation special, mainly for users of other systems? You could advertise your mag in *PC Format* and other Future Publishing titles that month.

We, as Amigans, need to show everyone that we're still alive, and maybe this could attract a few more readers to *AF* as well. Maybe you could bundle *Amiga Forever* or something like that with the magazine as an extra CD that month.

5 When the first PowerPC Mac emulations come out for the Amiga, do a huge article on emulation of this machine. A lot of people don't seem to realise they can have *Word*, *Excel*, *Photoshop*, *QuarkXPress* and so on



The latest emulation news can always be found in *AF*.

running fast, bug-free and every bit as easy to use on their Amigas. Some switch to another platform because of incompatibility hassle or lack of good games. I'm not saying that Amiga software is bad – if it was, I wouldn't be writing this on my Amiga today, but there are still situations when you need to have compatibility.

6 A feature on patches that improve compatibility for old games. I'm sure many people haven't even heard of *WHDload* and *JST*. These enable owners of '060s with lots of memory and AGA Amigas to run old games that would normally crash on such setups. The games will now run directly from hard drive as well, and most of the time they add a 'quit to WB' option.

Such an article would also give you a great opportunity to have a second look at some great classics from the A500 days and to tell us where we can buy them from.

7 The demo scene is one of the places where the Amiga is still respected

EYE LIKE IT!

I'd first like to let fellow readers know how good the service I had from EyeTech was when I towered up my Amiga. I phoned several times and received good advice with no fobbing off. I'd recommend the EZTower to anyone.

I also want to let you know that I've just gone online, due to Freeserve. As a older person (52) I thought that for the use I wanted on the net (i.e. browsing) a charge of £12.00 plus wasn't worth it.

I bought the whole kit of modem, *NetConnect2* and *STFax Pro* from Active Technologies. The setup of a system with *Genesis* is easy, even for a novice like me. Within 15 minutes I'd connected to Freeserve using your instructions in the mag.

Any novice surfer thinking of going online should try Active because they're very helpful with plenty of information.

The main reason for this letter is a request for an archive of all the subs disk passwords for the CDs. I have all the CDs but have used the floppies for other things. I'd like to be able to de-archive from CD but haven't taken all note of all the earlier passwords. I hope this is possible as I think that many other subscribers may be silly like me.

J. W. Hodgkinson
via email



Hmm. Well, if anyone who's lost the subscriber passwords wants them again, they can always contact our subs department and ask them. The best way is probably via email (subs@futurenet.co.uk), but the phone number and address are at the back of the mag as usual.

Lots of praise for the Eyetech EZTower and for their 'no fobbing' help service.

and well used. I suggest you start writing reports from The Party, The Gathering, Assembly and other big scene events.

I know the scene isn't very big in England and many of your readers might not know what it is at all, but this would be a great opportunity to introduce it to them. If you're in need of writers, tell us. Articles on the scene written by non-sceners tend to suck, really. Well, in my opinion, that is.

8 Continue telling people how wonderful graphics boards are. They can really change the life of an Amigan. No more palette trouble, really fast and huge resolutions, high refresh rate, access to flat PC monitors with a crisp picture, *Doom* runs faster… Do I sound like I'm a marketing guy?

Well, I was impressed when I first got my CyberVision3D board. It helped speed up web browsing tremendously, as well as the many other tasks that had to run in 256 colours or more.

9 Would it be economically impossible to drop the floppy edition of the mag? Surely it must mean a lot of extra hassle and there can't be that many readers without access to a CD-ROM drive these days. Anyway, it's just a suggestion.

Whatever you think of my ideas, please keep up the good work you're already doing. Thanks!

Even Sandvik Underlid

1 I'm not sure what you mean here. We can't radically change the way the mag looks every month because people wouldn't know what to look for. No other magazine does this either, except for those who do it as a conscious design attempt. Having said that, we'll listen to any ideas that anyone sends in about a new look for AF.

2 We've done it too in our past, and I'm sure we'll do it again soon.

3 Unfortunately, the cost of these things makes them prohibitive. We don't make enough of a profit to be able to fritter it away on other covermounts, I'm afraid.

4 We only recently did an update to our long-running emulation feature by Simon Goodwin, and we're unlikely to be able to afford to put Amiga Forever *on our cover as a separate CD.*

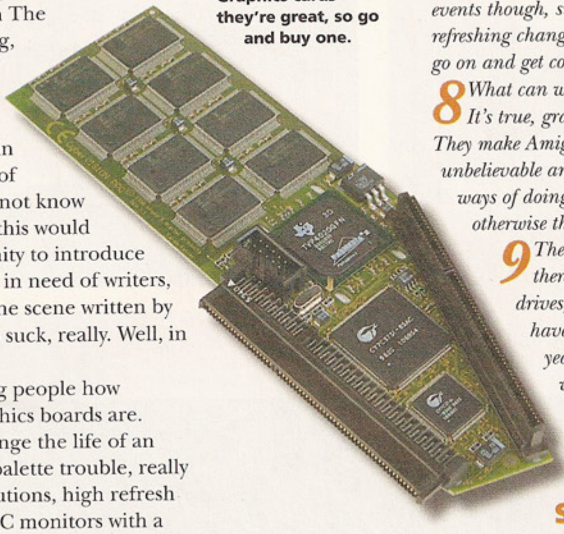
5 Don't worry, when PPC emulation of Macs and PCs is available we'll be very swift to come out with a feature about it. However, I'm not sure about your assumption that Word *et al. run in a bug-free fashion. I'm sure that Microsoft and the other software houses involved would love them to do so, though.*

6 You've got a good point there, actually. One feature about old Amiga games coming up soon!

7 Unfortunately, in my opinion, a lot of sceners can't write for toffee either, so it'd be a difficult job. I do want to cover these events though, since they make quite a refreshing change from the regular sales that go on and get covered.

8 What can we do? How can we say more? It's true, graphics cards are wonderful. They make Amigas so much faster it's unbelievable and they open up lots of new ways of doing things that you wouldn't otherwise think of.

9 There are still a lot of readers out there clinging to their floppy drives, even though some of us haven't touched a floppy disk in years. At the moment, the floppy version of Amiga Format *will continue.*



Graphics cards – they're great, so go and buy one.

BARBARIANS AND SWEATSHIRTS

I saw *The A-Z of Spectrum Games* and in the bottom left hand corner you'll see the box cover to *Barbarian 2* for Speccy, C64, Amiga and Atari ST.

Well, on the Speccy and C64 cover the bloke on the right is surely Wolf from *Gladiators*. Do I win a nice free *Amiga Format* t-shirt or sweatshirt? Please don't send me one of Nick's old ones.

Chris Seward via email

Unfortunately, we're right out of sweatshirts, Nick's or otherwise. However, we do have a nice half-eaten apple and a peculiar sock that no-one at Future wants to claim if you want them. Seriously though, send me your mail address and I'll put a bundle of stuff in the post for you.

Barbarian or Wolf? What do you think?



TA FOR THE TIPS

Your tip was just what I needed, as published under 'Snippets' in the March 1999 issue of *Amiga Format* (AF121), about how to keep all incoming mail at a Freeserve 'family account' separate. Very, very helpful.

J. M. Wasilewski

FAULTY MEMORY CHIPS?

Though I don't think you reply to letters, I'm going to continue on the off-chance that you're in a sociable mood. Reading your venerable publication many moons ago, I remember coming across the first review of an '060 board for the A4000.

In this literary masterpiece I'm fairly sure that reference was made to an 80MHz revision of the '060 chip, though my memory could be failing me, as it so often does.

Given that various innovative creatures now seem to be drawing on every last line of the Amiga's outdated architecture to keep it alive, I was wondering why this chip hasn't been exploited – an overclocked version would break 100MHz and make the PowerPC board even more sparkly and shiny. I know Motorola dumped this series years ago but there must be some knocking about.

Yours in desperation as this problem has wracked my every waking moment and is trying to penetrate my dreams – please help me.

Graeme Doran via email

I think that the mists of time have become entangled in your memory. I certainly wrote a news piece about the possibility of a fast '060, and originally the '060 range was supposed to include an 80MHz version, but Motorola never made it.

The fastest '060s around now are 66MHz units and we'll be reviewing the first 75MHz '060 accelerator based around one of these (overclocked) chips next issue.

WE JUST CAN'T GET RID OF HIM...

Just a quick note to ask where Nick Veitch is going.

David Durand via email

I figure Nick needs to answer this in his own inimitable way, so:



Hello! I haven't left the world of magazines. In fact, I'm in the process of launching a new one, which is, er, about magazines. Computer Publishing (first issue on sale April 28th) is a DTP mag which will, obviously, be concentrating on desktop publishing. Very little of the mag will be platform specific as it'll mainly deal with best design practices, ideas, techniques and whatnot.

It'll also have a CD which will have a fair amount of fonts (Adobe and Truetype, both of which you can use with the right software) and copyright free images (JPEGS), as well as some EPS clipart which might come in handy.

If you want to produce posters, newsletters, fanzines, flyers or your own Amiga magazine (steady...), it's worth looking at. Or will be when I've finished it, anyway. Oh, and thanks for all the supportive emails and letters I've received – it's nice to feel appreciated. Regards,

Nick Veitch
Editor, Computer Publishing

The Gallery

ON THIS MONTH'S CD

AFCD39:-ReaderStuff-/-Gallery-

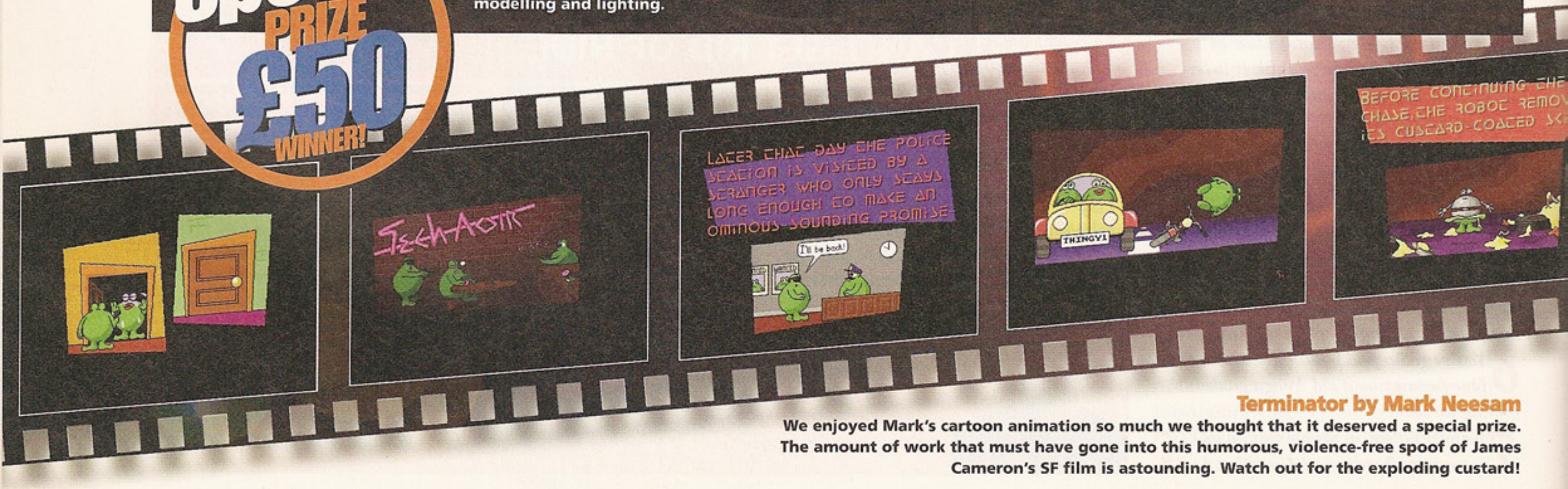
Richard Drummond takes his first wander around The Gallery.

Reader of the Month £50 Winner!

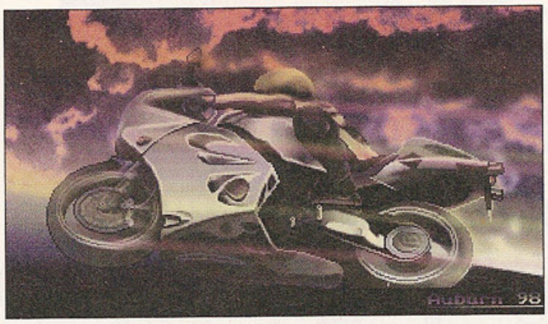


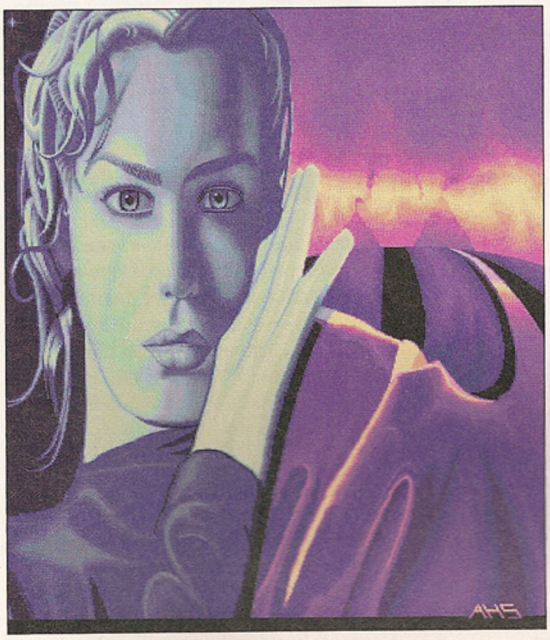
You Sure It's My Round
by James Pass
James's excellent render takes the prize this month, not only because its subject matter is one close to our hearts but also because of the realistic modelling and lighting.

Special Prize £50 Winner!



Terminator by Mark Neesam
We enjoyed Mark's cartoon animation so much we thought that it deserved a special prize. The amount of work that must have gone into this humorous, violence-free spoof of James Cameron's SF film is astounding. Watch out for the exploding custard!

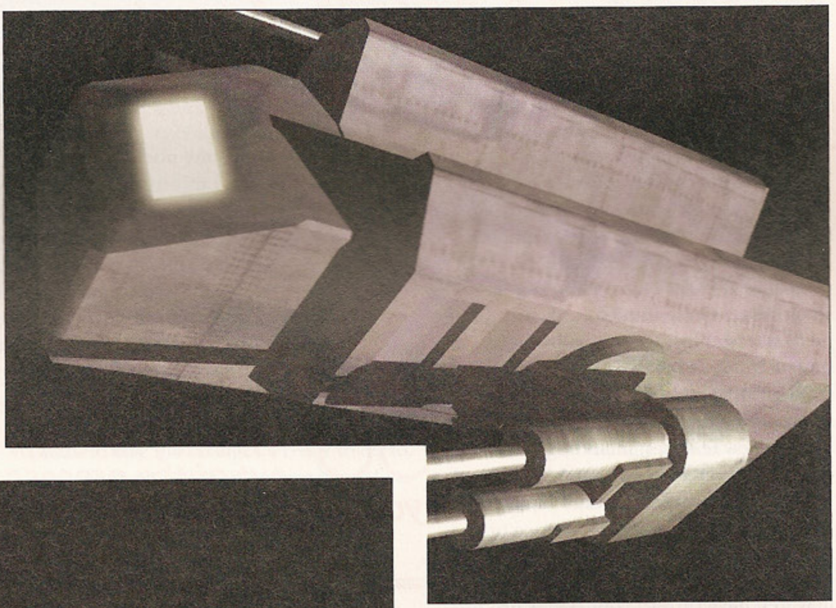


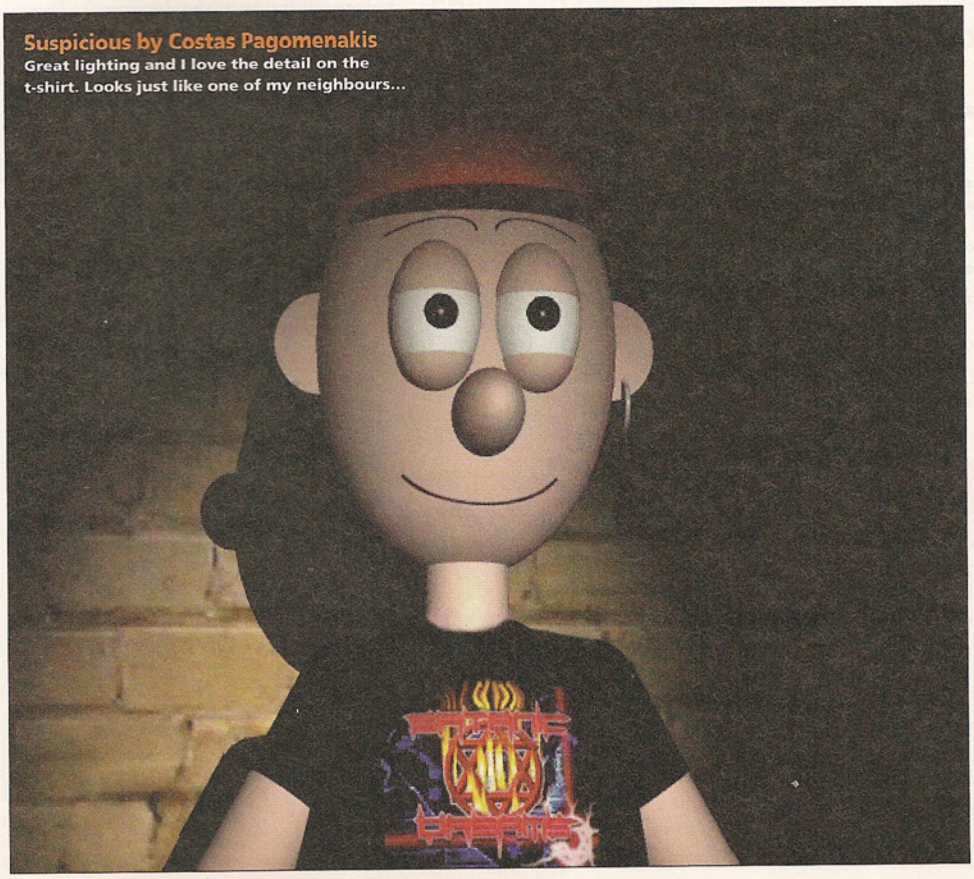


Purples Skies and Honda CBR by Auburn Hodgson
While neither of these two hand-drawn images are outstandingly original, the moody purple lighting certainly adds a lot of atmosphere.

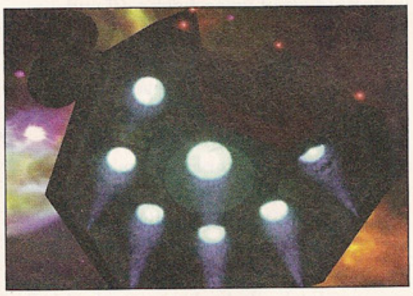


Truck by Juha-Pekka Jokela
This is an unimaginatively-titled but otherwise sound composition. The foreground was modelled and rendered using *Imagine* and *Cinema4D*. The fractal mountains in the background were created with *VistaPro*.





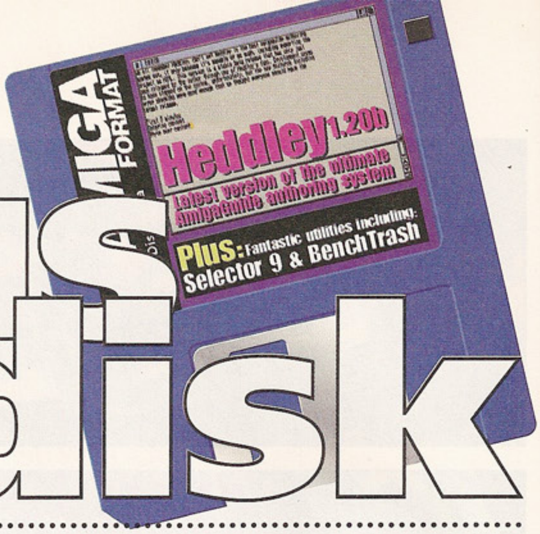
Suspicious by Costas Pagomenakis
Great lighting and I love the detail on the t-shirt. Looks just like one of my neighbours...



Beyond by Kevin Jones
Spaceship renders are two-a-penny, but these are some of the better ones we've seen. The models are apparently to be used in a game of the same name that Kevin is working on.

CONTRIBUTIONS

If you'd like to enter your work for The Gallery in *Amiga Format*, read the Reader Submission file on the CD or simply send your work to this address: The Gallery, Amiga Format, 30 Monmouth Street, Bath, BA1 2BW. Please make sure you include the reader warrant from the CD pages in this mag.



Serious AMIGA FORMAT disk



Dave Taylor gets stuck into a new version of this powerful AmigaGuide tool and introduces another bumper collection of utilities, including the great ***Selector***.

Heddley 1.2b

We all remember *Heddley*, don't we? *Heddley* is the best AmigaGuide authoring system out, if only because it's capable of so much, including exporting the project as HTML. This version is a stable beta release that has only just been released by the author through one of *Heddley*'s fans.

Unfortunately, development seems to have stopped on the system, but the new features, including error checking, were so good that we thought that everyone should have the latest release.

If you've ever tried authoring an AmigaGuide document by hand you may well have thrown your hands up in despair, given up and gone off and had a cup of tea or coffee, whatever's your poison. *Heddley* takes all the pain out of the process by giving you a fantastically easy to use front end.

Before starting, you need to appreciate the basics of how an AmigaGuide is structured. An AmigaGuide is a single file database where individual pages are nodes within the database. You can link from one node to another by setting up buttons and they allow you to leap to specific line numbers of nodes.

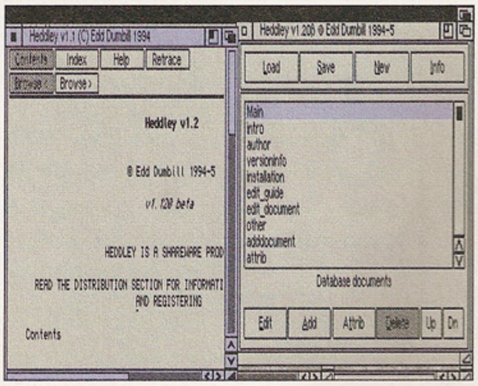
When *Heddley* is started you can load in an existing AmigaGuide and you'll see that every node is displayed in the list of documents within the database. You can view each node separately and work on them.

> *Heddley takes all the pain out of the process by giving you with a fantastically easy to use front end.*

NEW INSTALLATION

This month's coverdisks introduce a new Workbench driven installation procedure. To use the disks you must have a Workbench 3 Amiga with all the WB3 commands correctly installed. Boot from Workbench and then insert the coverdisk. Double click on an icon and follow the on-screen instructions. You can install directly to a hard drive, and a collection of some of these utilities can also be installed to a floppy disk if you don't have a hard drive.

If you're installing to a floppy, make sure you have a completely empty, pre-formatted floppy before starting. The script won't be able to format the disk for you. Let us know what you think of the new installer – after all, we've done it to make your lives easier.



***Heddley* can load existing AmigaGuides and separate them, which is great for conversion to HTML. Here's the program's own guide filed loaded and previewed.**

AN AMIGAGUIDE IN 5 MINUTES

Let's start though by creating our own AmigaGuide from scratch. Click on the New button in the top row of buttons. This will create a new guide with the only essential node, Main, in the database. The Main node is the only document in the database that you cannot rename and a Main node has to be present in the AmigaGuide in order for the viewer to be able to display it.

The main node is the table of contents, where you place the introduction and the links off to all the other documents.

Before we start editing the document you should click on the Attrib button in the bottom row of buttons. This opens up the attributes for the document. In the second box down you can type in a name for the document. This title will be displayed in the titlebar of the AmigaGuide document whenever this node is viewed. Enter something like "Amiga Format – From the top…". The TOC button sets which node is going to be loaded when someone clicks on the Contents button when viewing this node.

Similarly, the Next and Prev entries are the ones that will be used to define which node should be set after and before this node in the document. This is so that when users click on the Browse backwards or Browse forwards button in AmigaGuide, they'll go to the node you want. Obviously, as we've only just created this database, there are no other nodes for you to select, but when you've created some more you can come back here. You can type in a node or use the pop up requestor which will display all the other nodes in the database for you to choose from. There are other self-explanatory options too, like Font and Word Wrap.

ENTERING CONTENT

When you've accepted the attributes you can then click on the Edit button, which allows you to actually set up the content of the node. When you click on this for the first time you'll see an empty window. You can't type text directly into here. This is the markup screen, not the text entry. To get the text into your node you have a couple of choices.

The first is to import an existing text file. This is easy; simply go to the Document menu from the new window and select Load New Text. This will give you your test for you to mark up in the

MORE EXTRAS THAN YOU CAN SHAKE A STICK AT...

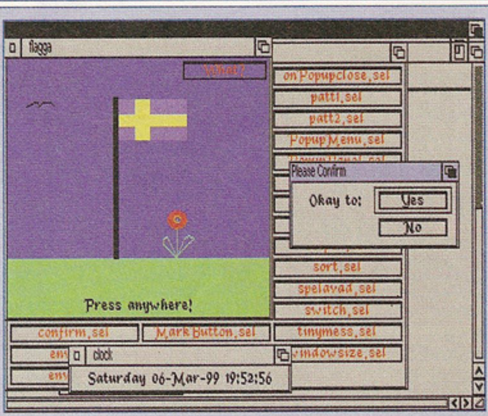
This month we really do have a bonanza of goodies for you. There's not enough room to cover all of them, but here's a few more of the choice ones we recommend you investigate.

SELECTOR 9

***Selector* is an impressively flexible launching tool that allows you to do more than simply start programs. As it can use variables, you can also work with input back from the user.**

Everything about your windows is configurable and there are many new commands accepted in this version. To get started you can play with the example scripts that are supplied, and the best way to do this is to load up the AmigaGuide documentation and work through the QuickStart tutorial.

Remember that in order to use *Selector* scripts, you need to create a .Sel script file for *Selector* and, additionally, an AmigaDOS script to fire it up. All of this and more is explained perfectly in the documentation.



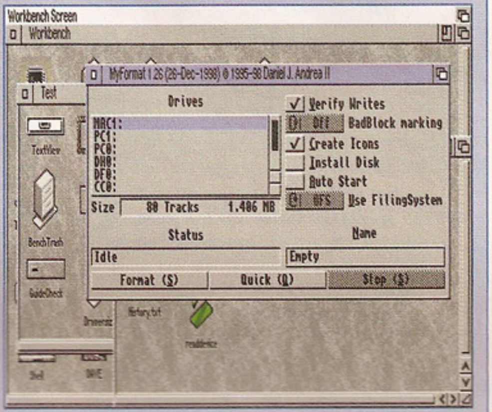
Selector 9 **is the latest version of the powerful launcher which runs off a script file you create. The number of internal commands it can deal with has mushroomed.**

BENCHTRASH

This is one of the most complete and easy to use Workbench Trashcans we've seen. Like the counterparts on Windows and Mac, you can throw away documents and retrieve them from the trash. This is a good way of spring cleaning as it means you can work through everything and then if something you come across reminds you why you needed that document, you can get it back. Of course, if you do want to get rid of the files you can simply empty the trash. It's like the old Trashcans from OFS floppy disks, except for your hard drive, and much better.

ALSO ON THIS DISK:

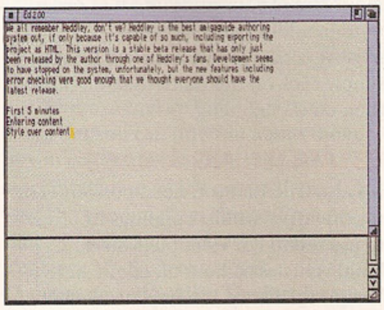
STC Library – This is required by the version of *BeatBox* from the March issue of *AF* (*AF121*). Place these libraries in your libs:.
Guide Check – This is included for those of you who don't need the power of *Heddley*. It checks AmigaGuides for errors.
Dir2HTML – This will create an HTML listing of a drawer's contents.
TextView – An advanced text viewer.
Info – A replacement Info command.
MyFormat – The latest version of the popular Format replacement.
PortHandler – An improved version of l:port-handler.
DrawerSize – Shows you the size of a drawer – dur!



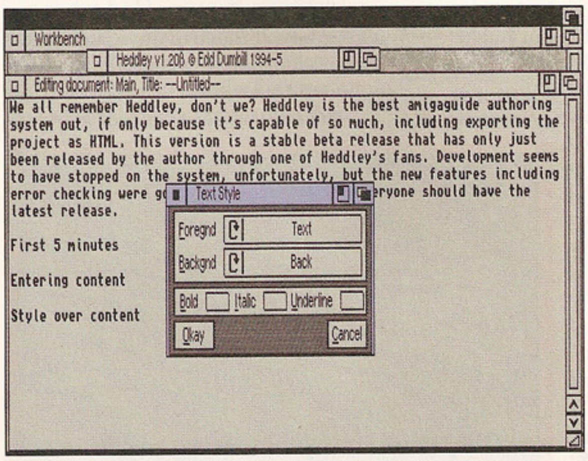
***My Format* remains a favourite. The program offers a greatly enhanced interface which allows you to format disks.**

window. If, however, you need to write the text from scratch, select Edit Text from the Document menu.

This will open up the text editor (Ed, by default) into which you can type your text. If you don't like using the default editor you can set up a different one to be used in the *Heddley* Icon information. When you've finished typing in the text for the node, close the text editor. If this is Ed, when you click the close gadget you'll be asked if you want to save the changes. Press Y to do so.



Not very exciting looking, we know, but from within the markup screen you can load the text editor to change the text for that node.



Wand in some text within the markup segment and you can then open up the Text Style requestor and change the colours and style. The font is set up in the document attributes.

The text will then be transferred back to the markup screen. Here you can now wand over words or phrases and turn them into links. To do this, drag the cursor over the part of text you want to use as a button and then go to the Buttons menu and select the Make into Button menu item. A requestor will open where you can choose what sort of link the button should be. The most common sort is an Internal Document Link which allows you to link to another node within the database.

You can either type in the name of the node, or select an existing node from the pop up requestor. If you want to link to a node that you haven't created yet, click on the Create Doc button and create the node from here. This is the same as doing it from the main part of *Heddley*. If you want to jump to a specific line number within the node then you can enter that line number here too.

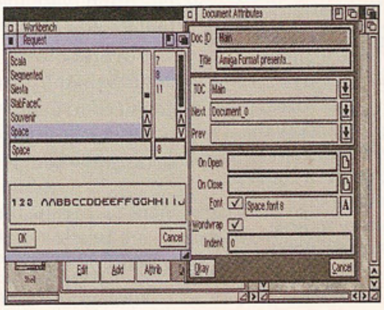
As well as internal links, you can scroll through the other options and create links to execute ARexx scripts, AmigaDOS commands, external file links (to pictures or whatever) and even a Quit command to close the database.

STYLE OVER CONTENT

You can also change the style and colour of text in the document. Again it's accessed from the Buttons menu. Wand in the text, select Apply Text style and another requestor will then make it easy to change the style.

You now know enough to enter in more nodes and create a complete AmigaGuide. Don't forget that you should edit the attributes for each node to make sure the whole AmigaGuide functions properly. When you've finished you can check the database from the Projects menu in the main window. You can also export it from here, either as plain text or as a set of HTML documents.

Heddley is a powerful and extremely easy to use package, and although it proved very stable in use for us (it never actually crashed once, in fact) bear in mind that it is titled as a beta release, so save your work frequently.



Each document or node within the database has its own attributes page where you can change the settings for the title and position of the document within the database.



Games disk

AMIGA FORMAT



Dave Taylor introduces this month's double whammy of two stonkingly excellent new games – a *Dune II* clone and a ghostly puzzler.

Wargrounds

Remember *Dune II*? I do. It was responsible for several missed night's sleep, late arrivals at work and many arguments. It was the precursor to the massively successful *Command and Conquer* series of games on the "other side" (Windows).

Recently, several Amiga programmers have been releasing their homages to the genre and this latest offering is an advanced one, with many refinements to the ideas brought in to the gameplay by the original *Dune II*.

> "The soldiers come in various flavours and are obviously your military personnel for defending and attacking."

SURVIVING THE ONSLAUGHT

When you start the game for the first time you'll find that you have a standard mobile unit. Within a minute you'll be attacked by the enemy soldiers who will fire on your vehicle. If you let them get away with this, they'll soon blow it up and it's game over, man. Luckily there's a way to dispatch them. As soon as you can, click on your vehicle and then click on the Personnel button in the bottom right of the screen. This will give you a list of the units which are inside the vehicle.

Click on the Commando and then on the Move button. Then click on the outside of the transport towards the bottom right of the part of the game screen that isn't fogged over. The Commando will come out and stand near to the vehicle so it can guard against attack. When the bad guys come, he should be able to deal with them for you. You can now cancel the Personnel menu and click back on the transport.

There's also a build option. Click on this and you can start to build a structure to place. To move through the structure types, click on the Next button at the bottom of the screen. When you click on Build, the structure will be started. They take time to be built but when they're ready the menu adds a Place command. Click on this and the map will show in the top of the right hand bar. Right click on a position in this map (keep it close to where you are now) and the transport will move and place the building there.

In order to advance in the game you need to build more than just the structures – you'll need military vehicles and you'll need personnel. In order to be able to train new personnel you'll need to have a Living Quarters building and you must move one of your units into it in order to train additional units of that type. To move a personnel unit into a building, simply click on the units, then on Move, then on the building.

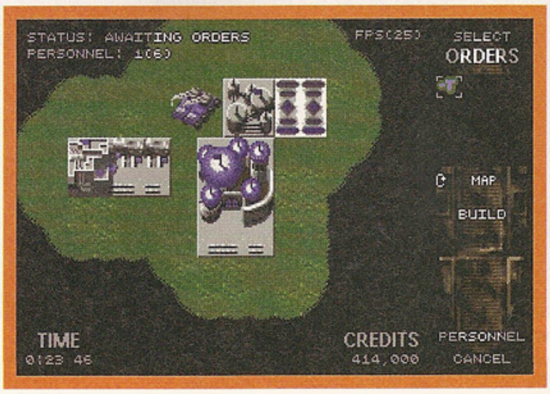


If you start playing the game like this and don't get your personnel out to defend your vehicle, the little soldiers in the bottom right will blow you up. This is definitely not a recipe for success.

ESTABLISHING A BASE

It's also true that you need personnel of specific types within buildings in order to use them. For example, you can't build vehicles without an engineer in a Weapons Factory. When you've built a vehicle you need someone to get inside it in order to be able to drive it around. With nobody inside, you won't have the option to Move.

The refinery doesn't need



The base is progressing nicely and I have several engineers in my Weapons Factory building new vehicles.

STARTING WARGROUNDS

First of all, you do need to do a few things to be able to run the game – we couldn't make these changes before creating the coverdisk due to distribution legalities. The easiest way to play the game is to open a CLI and then CD to the game directory. Now type 'execute Wargrounds'. If you want to make it easier to do through Workbench, you'll need to add a project icon for Warground with a default tool of *IconX*. If that sentence doesn't make sense to you, simply follow the instructions for launching the game through the CLI.

Additionally, if you're running an A1200 you can squeeze better performance out of the game by renaming the wargroundcpu68020.lib in the program directory to just warground.lib. Again, if that's all gibberish to you, don't worry about it.

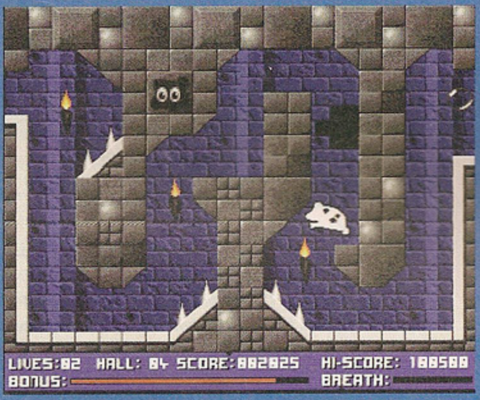
SUPER BUBBLE REMIX

Yes, it's a very odd title and the game certainly continues in the same vein. When you start you have to click the mouse button until you get down the options to the Start Game part. Then press the Space button. When the game itself starts you'll find yourself controlling a ghost with the mouse. The ghost can move around like a normal pointer – walls are no problem for it. However, the aim of the game is to move a bubble through a set of levels without popping it. The bubble will burst if it hits anything.

To move the bubble you put the ghost behind it and press the Space bar to blow. The bubble will head off in the opposite direction. You can move the ghost behind it to keep the bubble moving, but if you hold down the Space bar for too long the ghost will run out of breath, so watch the bar down in the bottom right.



Lift the lever and blow your bubble through the wall into the next level, where things get a little more tricky...



Look at those bends to navigate! It'll take some practice to puff your bubble through that lot.

The first level is simple – just blow it off to the left. From here on though, you need to navigate the bubble up and down through tunnels and this is a bit more difficult. If you press the left mouse button the ghost will rotate anti-clockwise and you can then blow the bubble in diagonals. Rotate the ghost to the correct angle and blow on the bubble. If you click the right button then the ghost rotates clockwise.

It might sound quite easy, but believe us, by level 3 you'll be less sure of yourself. Watch out for extras on the levels too – for example, on the second level you can blow out the candle and earn yourself an extra thousand points. Also, check out the different video modes where you can play normal, "old movie" and "game boy". Crazy!

personnel inside and harvesters (yes, very similar idea to *Dune II* here – harvesting brings in the dough) will use these automatically.

There are more buildings than these but you can find out about them as you go, or alternatively read the documentation which covers them.

The personnel can also perform different tasks. You start with a Builder, Engineer, Medic, Technologist, Commando and Soldier. The Builder is required to build any structures and the Engineer, as we said, is needed to go inside certain buildings in order to use them. A good idea here is to take the Engineer into the Living Quarters and train up some

The first building to create is the Living Quarters. Place some of your personnel here in order to train more units of that type.



more because the more personnel you have in the Weapons Factory, the faster they can build new vehicles.

The Medic will heal all personnel inside the same structure or vehicle as themselves. This isn't instantaneous.

The Technologist is used to build improvements to buildings and weapons. The soldiers come in various flavours and are obviously your military personnel for defending and attacking.

MORE TO WAR

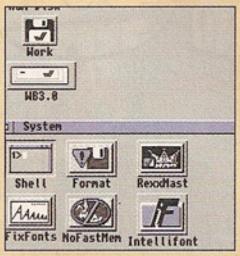
The game can also use team orders, which is done by selecting multiple units and then pressing Ctrl and F1-F10 to assign them to a team. With teams you can also record a set of moves you want to be performed so they can be used as delayed orders. More instructions on this can be found in the documentation where there's also a list of "god" keys to help you cheat. Tsk!

Also, if you click on the options button in the interface you'll get the chance to change things like screen size and some game options, as well as the Quit button.

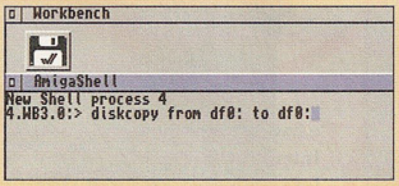
It'll take you a while to get used to the interface and the commands, but we think you'll find there's plenty in there to keep you playing. AF

BACKING UP YOUR COVERDISK

Copying your Coverdisk is really very simple. Just follow the stages below...

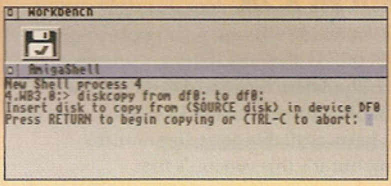


1 Boot up with your Workbench disk and find the Shell icon, in your system drawer. Double-click on this to go into the Shell.

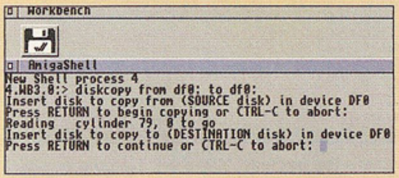


2 Type in the following line (with a zero, not the letter O), taking care to put the spaces in the correct places:

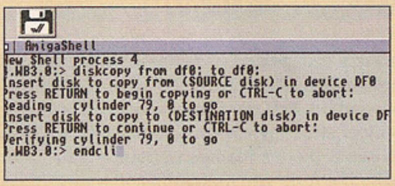
DISKCOPY FROM DF0: TO DF0:



3 When asked for the Source disk, insert your write-protected Coverdisk and press Return. All of the info on this disk will then be copied from the disk into memory.



4 Once your Amiga has read the info, it will ask for the Destination disk. Insert it and press Return. All information on this disk will be destroyed.



5 On an unexpanded machine, the Amiga may ask for the source disk again, because it copies in chunks. Finally, type endcli to close down the Shell.

DISK NOT WORKING?

We take every care to test the Coverdisk software, but Future Publishing cannot accept any responsibility for any damage occurring during its use. If your disk is faulty, send it back, with 2x26p stamps and an SAE to:

***Amiga Format* (insert name of disk)**

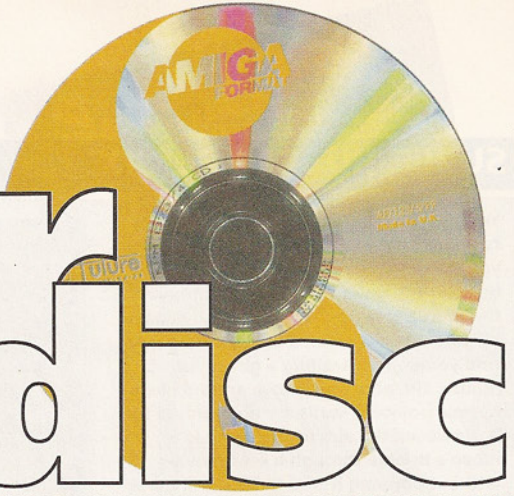
TIB PLC • TIB House

11 Edward Street

Bradford • BD4 7BH

If there is a manufacturing error then the stamps will be returned with a replacement disk.

Cover disc





AMIGA FORMAT

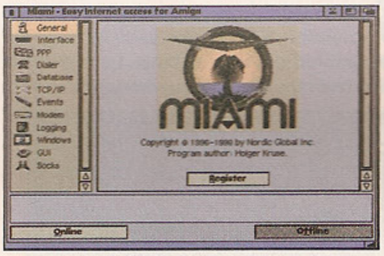
The 39th Amiga Format CD-ROM has almost 640Mb of software on it; so much stuff, in fact, that it's easy to get lost. Richard Drummond is your guide.

We have an explosion of Internet software on the CD for you this month, including the latest versions of some older favourites and some completely new software to improve your browsing.

MIAMI 3.2B

-Seriously_Amiga-/Comms/Other/Miami32b

This the latest version of this extremely capable and impressive TCP/IP stack. It's been available for a few months now, but it's this version's first appearance on an *Amiga Format* CD.



Jack into the net with *Miami* and join the communications revolution.

WHAT'S NEW

It's our never-ending quest to make our CDs better and easier to use. This month there's yet another evolution towards this goal.

Firstly, it's now possible to unpack *LhA*, *LZX*, Zip and DMS archives just by double clicking on them and selecting the path you want to extract the archive to. If you aren't using the default *AFCDPrefs*, you'll have to modify your Prefs settings to permit this. The file AFCD_Changes will tell you how to do this.

Secondly, we've included the floppy cover disks on the CD as DMS archives. This is so that users without CD-ROM drives on their Amiga but with access to one on a PC can take the floppies off much more simply.

The third modification is more weeding out of redundant system files on the CD. From now on we no longer have anything from WB3.1 here, but you will always find the latest versions of third party libraries and commands in the libs and c drawers.

The next difference is a visual one. Programs for the PowerPC now have a special icon for their drawer so you can easily tell what's for the PowerPC. Note that this change is for *NewIcons* only at the moment; users with standard icons won't be able to see it.

Finally, we've started including digests of the AFB mailing list on the CD in the drawer +System+/Info/AFB_Digests. This is so that users without Internet access can follow the discussions. If you haven't signed up for it yet, you can go to http://www.egroups.com/list/afb/ and join in the fun.



Watch out for drawers marked with that stylised microchip – they're for the PPC.

BROWSER WARS

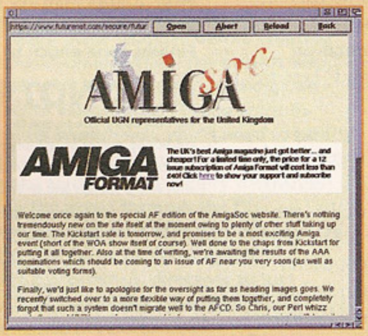
MCC_HTMLVIEW

-Seriously_Amiga-/Comms/WWW/MCC_HTMLview

After a long period of apparent inactivity in the Amiga browser market, things now seem to be hotting up. Not only do we have the *AMozilla* project and new versions promised for *Voyager* and *IBrowse*, there's the less famous *IProbe*. The man behind *IProbe* will be familiar to many, though; he's Alan Odgaard, the creator of many a *MUI* custom class.

IProbe is suffering from delays so Alan has decided to release its HTML layout engine as an MCC so that others can benefit from it. The supplied demo is impressive by itself as it's incredibly fast and copes well with frames and tables. In fact, the demo will work as a standalone offline HTML browser – try using it to view the websites on our CD.

Alan is currently working on supporting style sheets in *HTMLview*, while a Javascript interpreter is planned for the future, so this is definitely going to be one to watch.





If *HTMLview* is an appetiser for *IProbe*, bring on the main course!

THOR 2.6

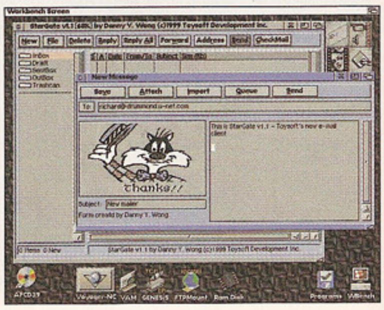
-Seriously_Amiga-/Comms/Other/Thor_2.6

There are the two types of Amiga user: those that find *Thor* utterly bewildering and those who say it's the most powerful and flexible mail and news reader available. This latest release is a minor upgrade to fix some bugs and introduce some new features.

STARGATE V1.1

-Seriously_Amiga-/Comms/Other/Stargate

Stargate is a new email client from



Your Stuff!

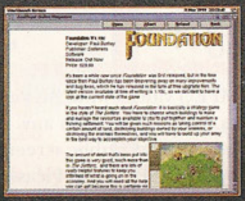
Reader of the Month £50 Winner!

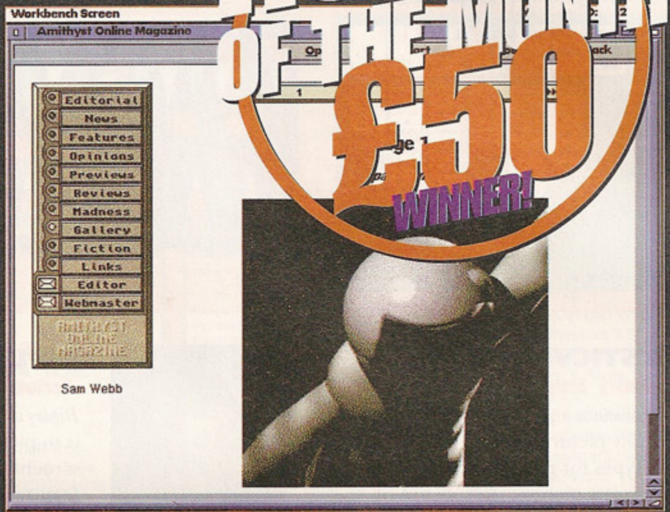
Yet again we're suffering from a lack of Readers' contributions this month. Come on you lot, get your acts together!

With that moan out of the way, it's time for the prize. This month's winner for the best contribution is Sam Webb for sending us the February 1999 issue of his online magazine dedicated to the Amiga, SF, fantasy and horror.

Amithyst, which can be found on the web at http://jghudson.future.easyspace.com/amithyst/, nets him £50 because of its elegant layout and neat graphics. Good work!

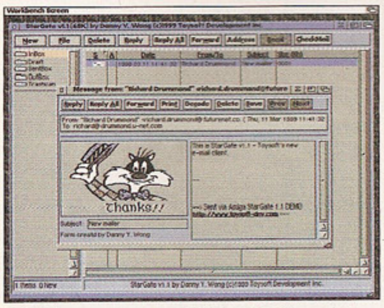






Samm Webb's *Amithyst* magazine is a showcase of good HTML design.

Toysoft, the makers of *AirMail.* The full version is stuffed with features, including multiple email accounts, colours forms with sound and PPC support for MIME encoding. This demo is restricted to one account and a maximum of five folders.



Brighten up your email life with *Stargate*'s forms feature.

IRIS 1.8

-Seriously_Amiga-/Comms/Iris

This month's third email client is *Iris.* Unlike most Amiga net software, it uses the *BGUI* system. The author, Jilles Tjoelker, says he wrote *Iris* because other Amiga mail readers were slow, unstable or lacked the features he needed.

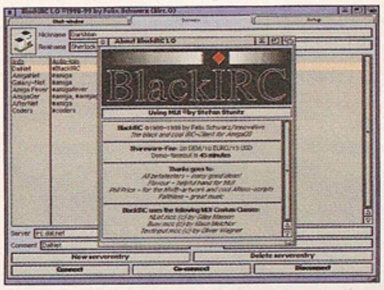
BLACKIRC

-Seriously_Amiga-/Comms/Other/BlackIRC

For some time now, Vaporware's *AmIRC* has been the Amiga's flagship IRC client, even causing PC owners to look on jealously. There's now a contender for its crown, though.

BlackIRC by Felix Schwarz also employs a *MUI* interface and has several unique features, such as support for video conferencing and the ability to view several channels in one window. *BlackIRC* is Shareware and the supplied version is time limited.

Continued overleaf ➡



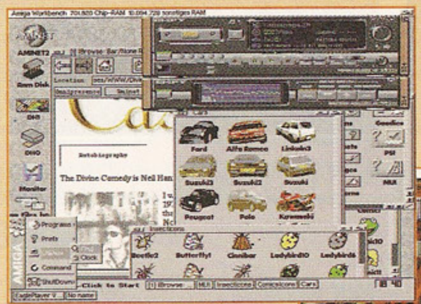
Internet chat with *BlackIRC* – definitely cheaper than 0898...

Show Us Yours!

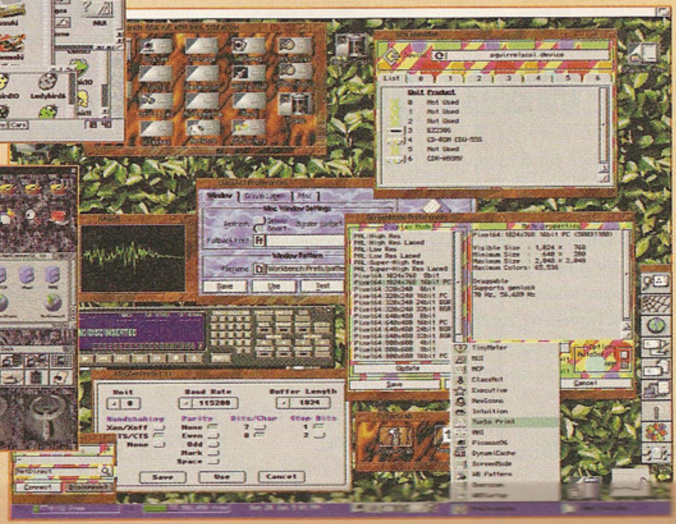
-ReaderStuff-/-WB_Screens-

This new section is proving to be immensely popular. Have a look at other readers' desktops, maybe for inspiration, maybe to drool with envy. If you think you can do better, send a grab of your Workbench, to the usual address, marked WB Screenshots.







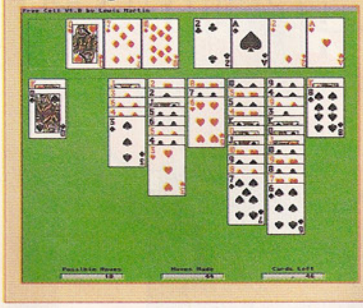


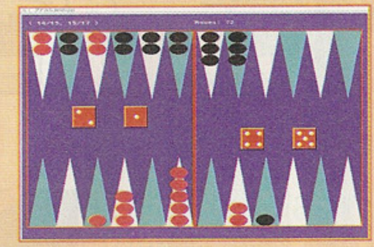
Make sure you wear your shades before looking at our WB Screens section.

GAMES, GAMES, GAMES

For 3D gaming addicts for whom *Quake* and *Doom* have begun to pale, we've crammed in 60Mb worth of add-ons for each of them to give your blasting a new lease of life. They can be found in the In_the_Mag-/Reader_Requests drawer.

If that isn't enough, you can also find the latest ports of *Hexen* and *Heretic*, and for those who prefer a more sedate level of gaming we've got *ProGammon 2.8* and *FreeCell*. *ProGammon* is a great version of the old board game favourite, with a strong computer opponent. *FreeCell*, a type of *Solitaire*, is based on the game with the same name which is shipped with Windows and which, next to *MineSweeper*, is probably responsible for the greatest waste of computer time in the '90s.





Stress-free but addictive gaming with *FreeCell* and *ProGammon*.

MYSTICVIEW 0.99F

-Seriously_Amiga-/Graphics/MysticView

MysticView is a powerful user- and system -friendly picture viewer. It uses DataTypes for picture loading and can display any picture, irrespective of screenmode, resolution and palette, on any selected public or custom screen.

It can dither images if the target screen has too few colours and can scale images to the required dimensions automatically. *MysticView* is highly configurable, with support for slideshows, animations and rudimentary image processing.





Dig out the popcorn and take a look at *Ripley*, the MPEG movie player.

RIPLEY 0.4

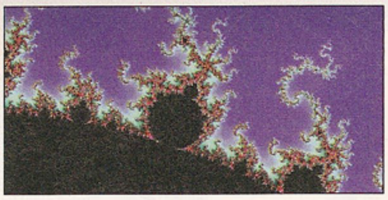
-Seriously_Amiga-/Graphics/Ripley

Ripley is to MPEG videos what *MysticView* is to pictures. It too will run in any screenmode or on any public screen. It features support for PPC and PicassoIV PiP. MPEG animations can be displayed in any number of colours or greyscale and can be scaled to any size.

FLASHMANDEL 1.5

-Seriously_Amiga-/Graphics/FlashMandel

Fractals may be rather old hat by now, but this new version of *FlashMandel* is well worth a look. It supports all 68K processors and any ECS, AGA or RTG screenmode. On machines without an FPU, *FlashMandel* uses 32-bit integer maths, while on those with an FPU it uses FPU registers directly. This means it's very efficient on any machine. The author, Dino Papararo, promises a PPC version for the future which will do real-time fractal rendering.



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If your *AFCD* is defective, please return it to the address below. Please make sure you have followed our installation procedures correctly to ensure that there is no physical problem. Please send us the *AFCD* along with a description of the fault (not forgetting your name and address). A new working version should be returned to you within 28 days. The return address for faulty discs is:

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This is open between the hours of 2pm and 5pm every Tuesday.

Tel: 01225 442244 Fax: 01225 732341

Email: amformat@futurenet.co.uk

(Please remember to put "Coverdisc" in the subject line.)

Please note that the helpline staff provide assistance with technical problems directly related to the CD and cannot provide training on the software or hardware in general.

We want your work!

You can either send it to us on floppies, Zip disks or CDs (we do take other media formats too). If you are going to send us a multiple floppy backup of your work, please use the version of *ABackup* we supply on the CD in the +System+/Tools/Disk_Tools drawer. We'll return any Zips you send us, so don't worry about getting your disks back.

If you have any further queries about how to send your software in then consult the Submissions Advice on the CD (in Ben_Speaks!, or in the ReaderStuff or +System+/Info drawers).

Your signature: ....

Files you send in this month will probably appear on *AFCD41 – Amiga Format* issue 125, July.

Please tell us:

Your name: ....

Your address: ....

....

Your postcode: ....

A contact number or email address: ....

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(2) the material does not contain any material which is defamatory, obscene or indecent and is exempt from classification under the Video Recordings Act 1984;

(3) that there are no legal claims against the material provided;

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FIRST COMPUTERS

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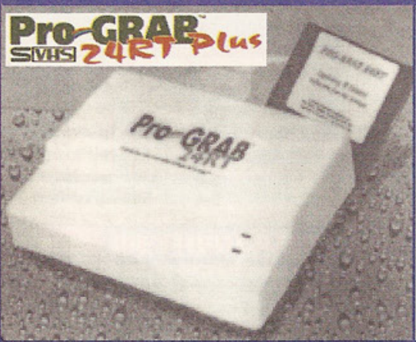
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WANTED

Mortal Kombat 2 and ATR games. No pirate copies, thanks. ☎ 01905 830015.

Desperate for DOpus. Require Directory Opus 4.12 WOA original disk. ☎ Stan 01328 851538.

A600 accelerator IE Viper 630 or Apollo A620. No RAM – bare board. ☎ 01633 278921.

Eric Schwartz CD archive. Will pay over original retail price and P&P. ☎ Daniel 0181 5205238 (after 6pm).

Latest version of Final Writer or Wordsworth for impoverished student who needs a word processor with a spellcheck function! ☎ 0117 9470119 (Bristol) and ask for Rob, or email Robert2.Steele@uwe.ac.uk.

Ami-Back, any version. I offer to pay up to £10.00. Please write with offers to: Mr G.Dixon, 19 Mountbatten Pavilion, Royal British Legion Village, Kent, ME20 7SE, or email gpdixon@excite.com.

HistoryLine 1914-18. Must be in excellent condition. 7 disks in total. Good price paid. Any format. ☎ 01472 503757.

Blizzard 1230/50 with FPU and 8Mb or more. ☎ 01250 876452.

Picasso II graphics board. Also Emplant Zorro II board. Will consider any boards for Amiga 4000 expansion. ☎ 01543 258079.

HV transformer for 1084S monitor wanted. ☎ 01778 421725 (evenings only). Email steve@goit.demon.co.uk.

Alien Breed 3D. Must be fully working, manual, etc. Floppy version. ☎ Glen 01260 252528 (after 4pm).

Hard drive for A500 wanted. Anything considered. Will collect. ☎ 01159 563882.

A1200 system. Specs: '020+, HD 250Mb+, CD-ROM drive (any will do), tower and/or accelerator if possible. Anything else isn't necessary as low-budget purchase. ☎ 07775 883140 or email tarquel@ddyfi.ruralwales.org.

Amiga 600 required with hard disk and 2Mb RAM. Must be local (Southend). Also wanted: application disk for ADI French 12/14. ☎ Elliott 01702 582621.

PERSONAL

Also see the AmigaAngels document on our CD.

For the latest Amiga news, reviews and opinions, download World Of Amiga disk magazine from www.trogsoft.freeserve.co.uk/woa/.

Amiga penpals wanted to swap tips, games and utilities. I'm back on the Amiga after a long absence. Have lots of disks to swap. Paul, 35 Shaw Crescent, Lochgelly, Fife, KY5 9LH.

BBSes

Send your BBS ads to the usual Reader Ads address. BBS ads will be printed for three issues.

Skull Monkey BBS, Lincoln. Online 6pm-8am, 24 hours at weekends. ☎ 01522 887933. Friendly sysop. Email sns@skullmonkey.freeserve.co.uk – keeping the Amiga alive.

Elevate BBS, Hants, online 24 hours. ☎ 01329 319028.

Bedlam BBS, Leicester, online 24 hours. ☎ 01162 787773.

Entertainment BBS, Wigan, online 24 hours. ☎ 01942 221375.

The Forum! BBS online 24 hours, Kilmarnock, Scotland. Over 35 members, 2,000+ files available, including games, pics, utils, etc. Sysop: Jamie Maguire. Run by a software development student. ☎ 01563 540863. 36K.

Bill's BBS, Cumbria, online 24 hours (mail only between 2.30am and 3.30am), ☎ 01229 434393 or 0870 7878615. Sysop: Bill Clark. Visit http://cumbria.cjb.net, email billsbbs@cornerpub.com or bill.clark@ukonline.co.uk. Supports Fidonet. Loads of free files, games, doors, quizzes,etc. Unlimited downloads.

X Zone BBS, supporting the Amiga for over two years. Do you want the latest files? ☎ 01635 820590, 6pm-1am, modem callers only (33.6K). Call now.

Quest BBS, Wakefield. West Yorkshire's largest BBS with over 30,000 files online, including the latest 7 Aminet CD-ROMs. Online weekdays, 6pm-6am and weekends, 2pm-6am. ☎ 01924 250388.

Moonlight BBS, Bedford, online 6pm-8am, 24 hours at weekends, ☎ 01234 212752. Sysop: John Marchant. Email gnome@enterprise.net. Official Transamiga Support BBS, unlimited downloads, very friendly sysop with excellent Amiga knowledge. Aminet online. Run by an experienced Amiga programmer who will help you out for free.

L's BBS, Kent, online 6pm-midnight. ☎ 01795-511103.

On The Oche BBS, Waterlooville, online 24 hours. ☎ 01705 648791.

Zodiac BBS, Hants. Online 11am-7pm 7 days a week. ☎ 01243 373596. Sysop: Destiny Co. Sysop: Axl. running Maxs Pro v2.11, Hellnet. Lots of files.

Amiga Nutter BBS, Herts, online 24 hours. ☎ 01707 395414.

Arachnoids BBS, Leicestershire, online 24 hours, ☎ 01509 551006.

Xanadu BBS, Wigan, online 24 hours. ☎ 01942 746342.

Echoes BBS, (Camberley). Line 1 ☎ 01276 502641, 56K, 24 hour. Line 2 ☎ 01276 502642, 33K, 24 hour. Sysop – Steve Barnett. http://surf.to/echoes.bbs. Latest Aminet downloads, nine online CD-ROMs, Fidonet and other mail networks. Offline reading available and free email to all members. In fact, free everything – no subs of any kind as the BBS is run for the love of the Amiga and Xenolink software.

Black Magic BBS, ☎ 01788 551719 after 10pm, over 6,000 files online.

Frost Free BBS, ☎ 01484 327196 (Slaithewaite, W. Yorks).

USER GROUPS

User group ads will be printed for three issues.

Join a new email club for Klondike, a Reko Productions game. Cardset creators and cardset collectors, Amiga and PC. Email kevin@reko.karoo.co.uk (make friends).

New Amiga sound and demo association seeks input, contacts and support to form a user group based around the Amiga music and demo scene. Interested? ☎ Daev 01243 864596 or 0961 985925.

Interested in Internet Relay Chat? Why not visit #Amigazone on Dalnet? We are a friendly bunch and meet at 10pm every day. Visit: http://www.tsd-ltd.demon.co.uk.

Is there anybody in the Northamptonshire area interested in starting up a new user group? Please contact me: ☎ 01536 724309 or email nsthomas@ukonline.co.uk.

Greenford Computer Club. 180 Oldfield Lane South, Greenford, West London. Meets: Thursdays 7-10pm. All welcome. Anything Amiga. ☎ Richard Chapman 0181 9988599 after 7pm weekdays, all day weekends, or email if97rrc@brunel.ac.uk.

The Amiga free helpline needs helpers, especially in video, music, radio, graphics cards, PPC and digital cameras. Also, anything else that you can think of. ☎ Terry 01709 814296.

Bournemouth: Dorset/Hampshire. Anyone interested? User group contacts. Amigan, one year, seeks new/old users for chat/helping each other. Email to start, can/will post later if not online. gctshe_m@mail, bournemouthandpoole-cfe.ac.uk.

Great Yarmouth user group. Anyone interested in joining this new group ☎ John 01493 722422.

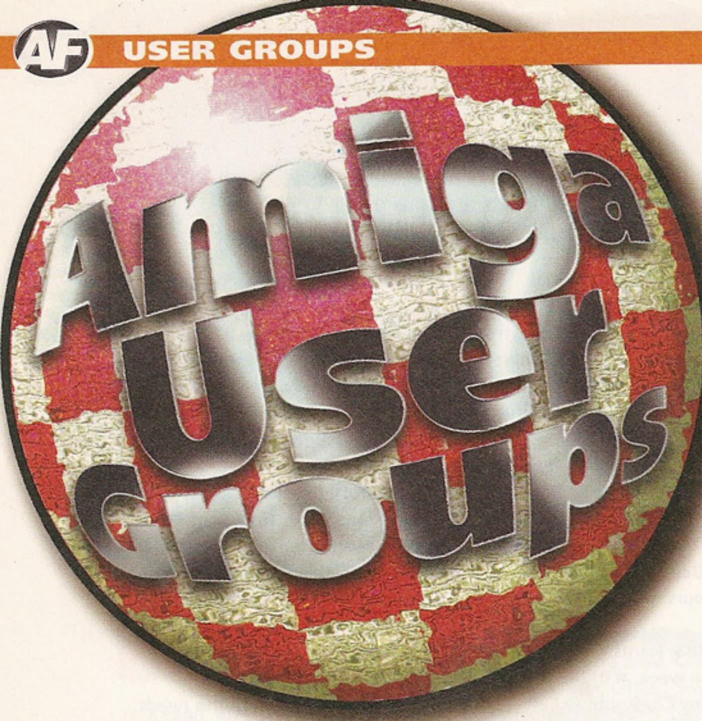
For the latest Amiga news, reviews, articles and interviews, visit the AIO website at http://www.amiga1.demon.co.uk/aio.

Any Amiga users in Birmingham wanting to set up a user group? Please ☎ Hitesh 0121 6056452.

Amiga free helpline needs helpers. Also, it needs to help other Amiga users. If you fit into either category, ☎ Terry on 01709 814296 for more info.

West Lancs Amiga User Group meets Sundays 1pm-4pm at St. Thomas the Martyr School Hall, Highgate Road, Upholland, Lancs. ☎ Stephen 01695 625063 or Ralph 01695 623865. Email ralph@twiss.u-net.com.

SEAL, South Essex Amiga Link. Meets twice monthly at Northlands Park Community Centre, Basildon, Essex. Offers help, advice, tutorials and presentations on popular software and hardware. Also scanning, printing, email and a 36 page A4 magazine. Contact Mick Sutton, 20 Roding Way, Wickford, Essex. ☎ 01268 761429 (6-9pm). Email seal@thunder.u-net.com or visit http://seal.amiga.tm.



Kickstart





As well as sales stands, there were numerous gaming competitions taking place on the stage.

Chris Livermore reports from the second Kickstart sale.

Almost a year has passed since the last World Of Amiga show in London, and although there have been other Amiga shows such as Infomedia '98 (Antwerp) and Computer '98 (Cologne) that are within reach of the UK, not everybody can afford the time or money to visit them. One Surrey-based Amiga user group, Kickstart, decided to redress the balance by organising their own Amiga events.

The second Kickstart sale was held at their regular meeting place in Ottershaw, Surrey, on February 27th. While this might not sound like the most prestigious place for an Amiga show, it's actually in a prime location, being only minutes away from the M25 and having ample free parking. Oh, and it's right opposite a pub, for those of you who need that little extra incentive.

Building on the success of their first sale last August, Kickstart managed to cram 14 stands into the admittedly small hall. The majority of the stands consisted of individuals and user groups offering second-hand hardware and software, although there were a few Amiga retailers such as Forematt Home Computing and RamJam Consultants selling their catalogue of Amiga goods and offering special show discounts.



Chris Green presents the winner of the *Doom* deathmatch with his prizes.

In addition to the sales stands, Kickstart had organised a games and demonstration area. Various members of the group were on hand all through the afternoon to demo and give advice on a number of wide-ranging subjects, including PPC, Mac emulation and various hardware configurations.

A number of games competitions had been arranged, the most popular being *Doom* and *Sensible Soccer*, both of which kept pulling the crowds. As an extra incentive, Kickstart had arranged prizes for the winners of each competition. Towards the end of the afternoon the winners of the gaming competitions and the raffle were announced and presented with their prizes. In addition to a number of smaller prizes, Kickstart had persuaded Amiga International to donate an A1200 Magic pack as their star prize, won by Jamie Winter from the Power Amiga Users Group in Portsmouth.



The show was very well attended and the crowds kept up throughout the whole afternoon.

As well as members from Kickstart, who organised the sale, a number of other Amiga user groups were in attendance, including SEAL, ANT, and PAUG (all of which will be featured over the coming months), and for many of us the show was not only a chance to pick up some great bargains or that illusive peace of software we'd been searching for, but also a chance to meet other user group members face to face for the first time.

While the Kickstart sale didn't have all the glamour and excitement that's usually associated with big shows, there was a feeling of team spirit and camaraderie that you don't get at a large, impersonal show like the World of Amiga. After the success of their first two shows it seems likely that the Kickstart sale will become a regular event, although it looks like they may need to find a larger venue before too long. For more details on Kickstart, or the Kickstart sale, visit their website at http://www.furry.demon.co.uk/kickstart or phone Rob Gilbert on 01932 562354

Over the coming months we'll be bringing you all the user group news from around the UK and beyond, as well as featuring individual user groups.



One lucky punter walked away with an A1200 Magic Pack – not a bad raffle prize!

KICKSTART INFO

Kickstart are based in Surrey and meet on the last Monday of the month in Ottershaw. All Amiga users are welcome for fun, help and general Amiga usage, plus tutorials and Amiga surgery.

For more details, contact Rob Gilbert: ☎ 01932 562354 or email gilbia@arrakis.u-net.com

News

This month there are two new user groups starting up:
ANT (Amiga North Thames), contact Michael Carrillo on 0181 5247544 or email: michael.carrillo@btonline.co.uk
Leicester, contact Sam Webb, email: sjwebb@excite.com or visit http://www.egroups.com/list/laug/

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If you have a feature idea, a long term test, a reader request or you want to be in the Amiga Angels list, send an email to ben.vost@futurenet.co.uk, with "Features", "Reader Review", "Reader Request" or "Amiga Angels" in the subject line accordingly. If you don't have email, a letter to the *AF* address with the same subject headings is also fine.

If you want to speak to us about a technical problem, we have a reader call day on Tuesdays. Call us on (01225) 442244 (10am–1pm, 2pm–5pm only). We're sorry, but we can't give games tips over the phone.

Next Month

WHITHER PPC?

We talk to the developers, the users and the programmers about this chip and its future in the classic Amiga line...

PLUS:

Reviews of:
*75MHz '060, **Flash ROM 2**, Zip 250, **T-zerO**, Photogenics 4.0, **hopefully the BoXeR (again!)**, **and much, much more...***

June Issue on sale Tuesday May 11th

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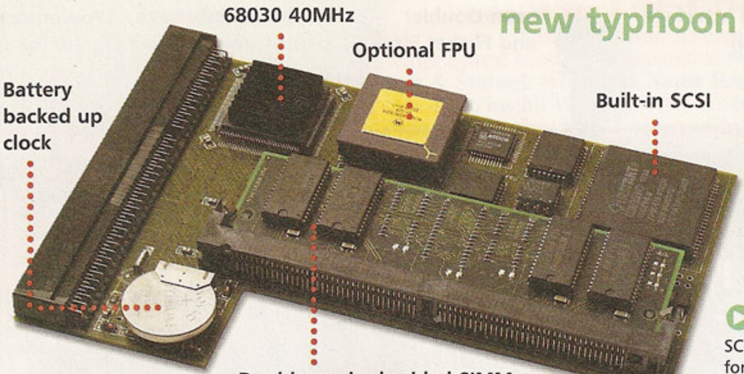
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Apollo full 68030 50MHz with MMU, optional 50MHz FPU, Up to 64MB of Fast RAM	£159.95
50MHz FPU for above	£29.95

a600 accelerator board

Viper 630, full 68030 33MHz with MMU, including FPU, Up to 32MB of Fast RAM, PCMCIA friendly	£65.95



cd-rom drives internal/external

ATAPI cd-rom drives

6x Internal ATAPI CD-ROM (bare unit)	£29.95
6x External ATAPI CD-ROM	£69.95
32x Internal ATAPI CD-ROM (bare unit)	£39.95
32x External ATAPI CD-ROM (tray loading)	£79.95
36x Internal ATAPI CD-ROM (bare unit)	£45.95
36x External ATAPI CD-ROM (tray loading)	£85.95

(External includes Buffered Interface, IDE '99 software, cables and 2 CD titles)

SCSI cd-rom drives

2x External SCSI inc. Squirrel	£65.95
32x Internal SCSI CD-ROM (bare, tray loading)	£89.95
32x External SCSI CD-ROM (tray loading)	£149.95

(External includes cables, Squirrel SCSI interface with software and 2 CD titles)

new cd-rewritable drives

4 x 4 x 20 CDRW ATAPI CD-Rewritable Int.	£269.95
4 x 4 x 20 CDRW ATAPI CD-Rewritable Ext.	£329.95
TwinBox with 4 x 4 x 20 CDRW ATAPI CD-Rewritable and 3.1GB Hard Drive	£479.95
Box of 10 CDR discs	£14.95
Box of 5 CDRW discs	£39.95

(All the above external bundles include: case, cables. 4-way IDE interface with IDEfix 97 fully registered, MakeCD, 5 x CDR discs and 1 x CDRW Disc)

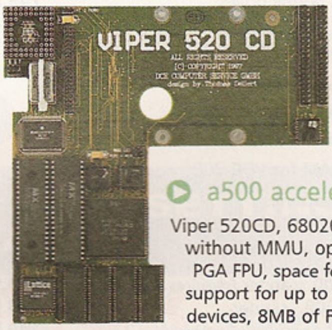
For any external removable device we offer the PowerFlyer instead of the 4-way buffered interface for £49.95

a1200 accelerator boards

Viper Mk2, 68030 40MHz, (up to 32MB), full MMU, optional FPU (PLCC 33MHz only)	£59.95
Viper Mk2, 68030 40MHz, (up to 32MB), full MMU, FPU 33MHz	£69.95
Apollo with full 68040 28MHz,up to 64MB	£119.95
Apollo with full 68040 40MHz, up to 64MB	£179.95
Apollo with full 68060 50MHz, up to 64MB	£269.95
NEW Apollo 1260LC, 68060 CPU clocked to 75MHz inc. MMU (not FPU)	£239.95

gvp accelerator boards

GVP 8MB RAM Board, 33MHz FPU, inc. SCSI, PCMCIA compatible	£79.95
GVP 1230 40MHz inc. 16MB (upgradable to 32MB) including 40MHz FPU and SCSI upgradable	£99.95
GVP 1230 50MHz inc. 16MB (upgradable to 32MB) including 40MHz FPU and SCSI upgradable	£119.95



a500 accelerator

Viper 520CD, 68020EC 33MHz, without MMU, optional 33MHZ PGA FPU, space for one 2.5"HD, support for up to four IDE/ATAPI devices, 8MB of RAM on board and 3.0 Kickstart ROM including full 3.0 Workbench disk set FAT Agnus slot to fit Mini Mega Chip	£99.95
Mini Mega chip (2MB Agnus chip and 1MB extra Chip RAM)	£79.95

memory expansion boards

A1200 4MB not upgradable, with battery backed-up clock	£39.95
A1200 bare with standard SIMM socket with battery backed-up clock	£39.95
A1200 with standard 4MB SIMM socket with battery backed-up clock	£45.95
A1200 with standard 8MB SIMM socket with battery backed-up clock	£55.95
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A500 1MB Chip RAM battery backed-up clock	£19.95
A600 1MB Chip RAM battery backed-up clock	£24.95
A500 2MB RAM with battery backed-up clock	£49.95
CDTV 2MB RAM	£49.95

memory modules and fpu's

for accelerator and expansion boards

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8MB SIMM	£19.95
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32MB SIMM	£55.95
32MB SIMM (slim for Blizzard 1260 boards)	£79.95
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128MB SIMM (Typhoon and all Blizzards)	£199.95
1MB ZIP RAM static column for A3000	£16.95
GVP custom 4MB RAM module	£49.95
GVP custom 16MB RAM module	£99.95
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33MHz PLCC FPU	£15
40MHz PGA FPU	£20
50MHz PGA FPU	£29.95

amiga 1200 magic pack

A1200 3.1, 2MB 68020, AGA chipset, Wordworth 4.5SE, Turbocalc 3.5, Data store 1.1, Photogenic 1.2SE, Personal Paint 6.4, Organiser 1.1 Pinball Mania and Wizz games	£179.9
As above with 260MB Hard Drive fitted	£219.9
As above with extra 8MB RAM	£259.9

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3.5" 3.2GB IDE including IDE cable and install disk	£129.9
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3.5" 6.4GB IDE including IDE cable and install disk	£174.9

(5.1 and 6.4GB HD are supported automatically by th PowerFlyer or by IDEfix 97 using the patch provided, an updated FileSystem is available on www.amiga.de Please note that cables included with 3.5"HD have standard 40pin headers. If you need to connect a 3.5 HD directly to the A1200 motherboard, you will need a special "stack" cable 44 high density (2.5") to 40 standard (3.5") IDE cable £12.9

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